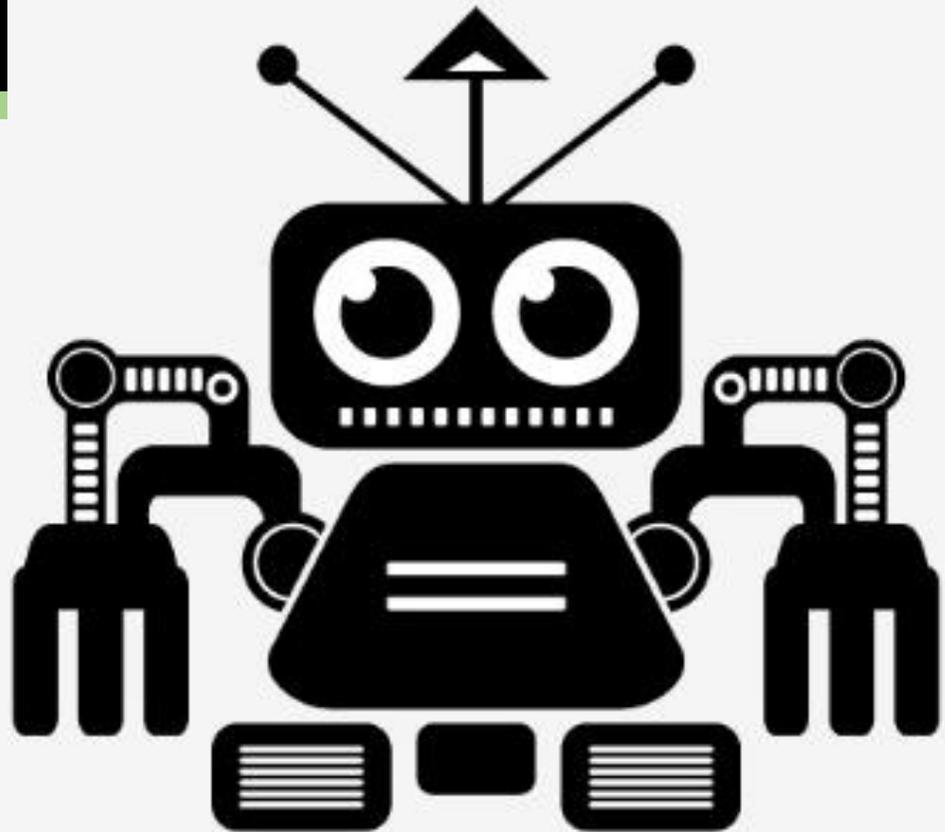


2019

Louisville Centrons

Team 7516

FIRST Robotics



Louisville Centrons

2018-2019 Business Plan

This is our preliminary Business Plan outlining the proposed activities for the year 2018-2019. This plan includes the budget, fundraising strategies, and the timeline of fundraising activities.

The 2018-2019 Centrons Robotics Team!



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1. Executive Summary

1.1 Introduction

This document is our proposed plan for a First Robotics team for Central High School Magnet Career Academy in Louisville, Kentucky. It is based upon other documents that we found from other First Teams. Although the intention of this plan is to qualify us for the FIRST Robotics Rookie Team Grant, we intend to use this as a guideline for the planning of our initial season.

1.2 Our Team's Mission Statement

"The mission of the Louisville Centrons FIRST Robotics Team is to allow our students to explore a synthesis of academic disciplines, including Engineering, Informational Technology, and Business Marketing. As a team, our members will work to design, build, and market a competitive robot while supporting the ideals of FIRST."

1.3 What is FIRST?

The For Inspirational and Recognition of Science and Technology (FIRST) organization was founded by Dean Kamen and Woodie Flowers in 1989. The intention of FIRST is to engage students into the fields of engineering and technology by creating a cooperative robotics competition. Their website is <https://www.firstinspires.org/robotics/frc>.

1.4 About Central High School

Central High School Career Magnet Academy is located at 1130 W. Chestnut St, Louisville, KY 40203 and has served the downtown community since 1882. Central began in a time dramatically different from now; a time of separation, inequality, and injustice for many people. In 1870, a group of leading black citizens appealed to the Louisville Board of Education for free schools for their children. The Board of Education opened two buildings in October for educating "children of the Africa race," to be financed by taxes collected from the black community. Thus began what eventually was to become Central High School. Consequently, Central has a rich history of academic and athletic achievement through many generations, and many students have parents, grandparents, or other family members who attended Central. This results in a deep sense of pride and tradition within the school and surrounding community.

1.5 Central's Mission Statement

We fulfill our vision by:

- Establishing high academic expectations for all students,
- Ensuring post-secondary success for all students,
- Engaging in culturally responsive living, and
- Encouraging passionate pursuit of global citizenship.

1.6 Team Goals

For this inaugural year, we plan to create a student-centered team that will create experiences that lead to future success. It will be a year of learning for us, but Central has already proven itself in the realm of competitive robotics. Our students have successfully competed in 15 VEX tournaments during the past four years, as well as hosting two tournaments of our own. We have three mentors with a variety of technical certifications, and we will have alumni attending Engineering school to help assist with design, but ultimately it will be our students leading the team. Our goal is to successfully design and build a FIRST robot and to compete in one or more events. This will lay down a foundation of experience that we can build upon in the years to come.

2. Team 201900199

2.1 Inaugural Year

This will be the first year for the Louisville Centrons FIRST robotics team. Our school wishes to transition from a VEX team to FIRST on the basis that it creates a synthesis of disciplines that will better prepare our students for post-secondary education.

2.2 Location

The Louisville Centrons is a school team of Central High School Magnet Career Academy located in Louisville, Kentucky. We operate out of our makerspace, The Colony.

2.3 Mentors

The Centrons will initially have two teacher/mentor coaches and one teacher/administrator. Coach Jim Gilbert has taught at Central for 20 years, and teaches robotics and English. Coach Shawn Canaday has taught Information technology for 25 years in Kentucky and Illinois. Administrator Chris Brown has been at Central for 11 years and teaches programing and material processing.

2.4 Alumni Advisors

In addition to the team mentors, we will have three alumni advisors who are currently attending the University of Louisville Speed School of Engineering: Brittany Jewell, Cody Gividen, and Alex Rana. These three were active in our VEX programs, and they helped us design and build our makerspace.

2.5 Student Demographics

The team is made up of 26 students, 8 girls and 18 boys. The class make up is 4 seniors, 7 juniors, 10 sophomores, and 5 freshmen.

2.6 Team Sponsors

After attaining the Rookie Grant, we will actively look for sponsors as part of our financial plan.

2.7 Team Growth

We have plans to increase team member with students who attend Central and students from nearby schools in Louisville. We realize the potential that a FIRST team can offer to the youth of our community. With our growth, we will actively seek additional mentors for guidance.

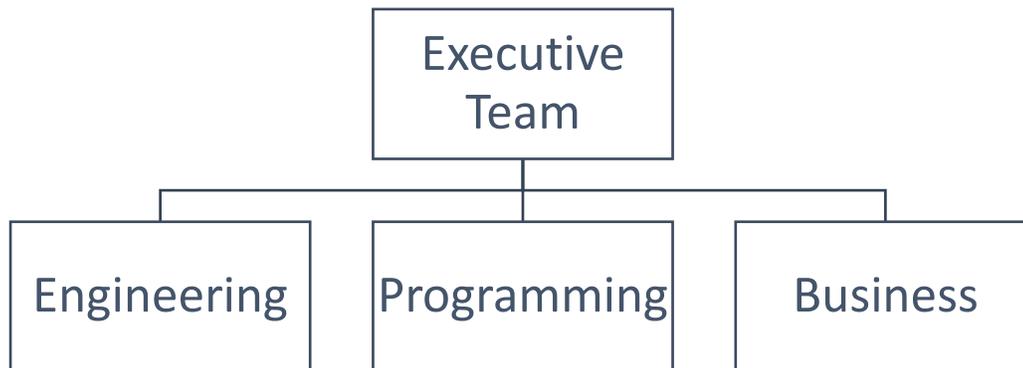
2.8 Collaboration with Other FIRST Teams

We have been in contact with Team 5492, Winner's Circle Robo Jockeys, from Manual High School. They have graciously agreed to work with us through our first few years as a team.

3. Structure and Organization

3.1 Sub-Teams

Based upon our research of other FIRST teams, we propose a three-part organizational structure managed by an executive team. Sub teams of engineering, programming, and business will focus on specific aspects of the project. Final decisions and guidance will be made by the executive team.

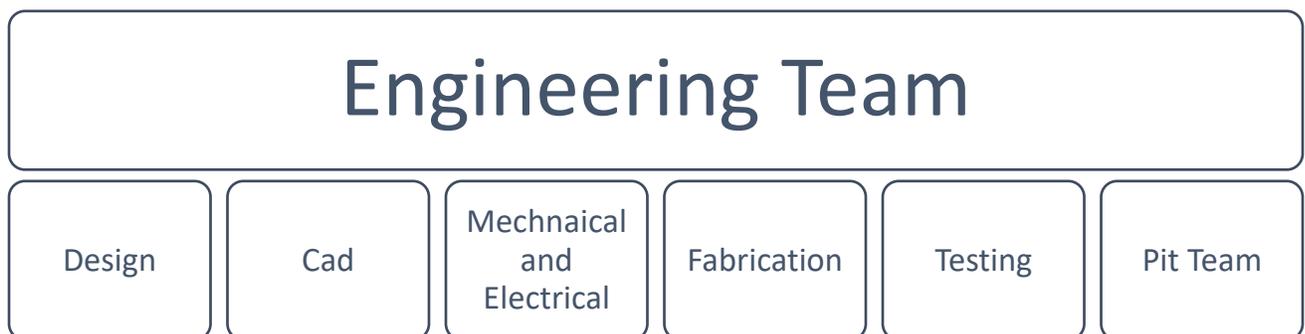


3.2 Executive Team

This team will be made up of a board of student-elected positions (president, vice president, and treasurer) the adult mentors and administrator, alumni advisors, and two parents. Once we attain sponsors, representatives will be invited to advise the team.

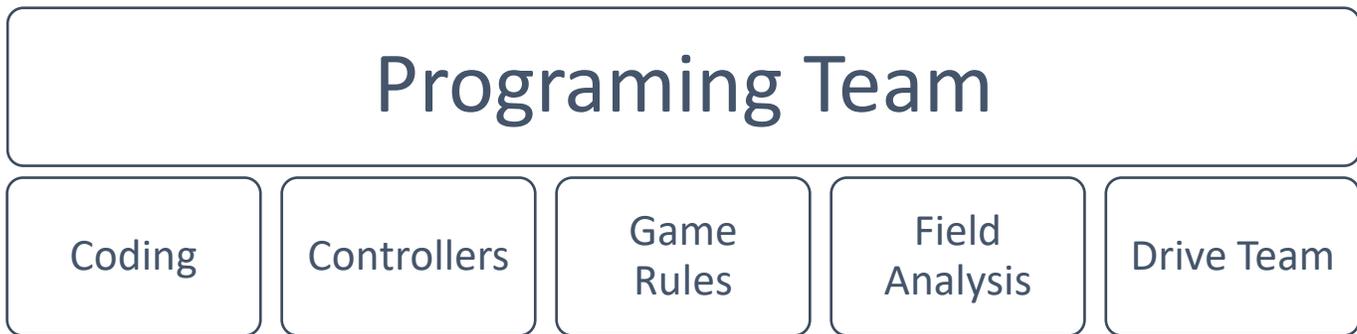
3.3 Engineering Team

The engineering team will be responsible for planning, building, and testing the competition robot. They will also form the pit team during competitions.



3.4 Programming Team

The Programming Team will develop the coding and controllers for the robot. They will also be responsible for analyzing the game rules and acting as the drive team during competitions.



3.5 Marketing Team

The Marketing Team will be critical to the success of the Centrons. Their primary role will be developing a sustainable financing plan for the season. They will accomplish this by soliciting sponsors and planning fundraising. They will also be responsible for purchasing, social media, public relations, community outreach, and the year-end celebration. They will work closely with Central High School's Sports Marketing Magnet program to develop an advertising plan.



3.6 Safety

We will make safety a critical aspect of our team's ethos. All members will be required to know all safety requirements. Eye protection must be worn by any member working with the robot. Our makerspace is equipped with an industrial first aid kit, and the mentor/teachers have been trained by the school district to respond to hazards.

3.7 Schedule

We have designated three seasons for our team. In the pre-season phase we have been recruiting members, registering our team, and applying for the Rookie Grant. We have been meeting once a week to educate ourselves about VEX by researching past events and looking at other teams' business plans. The build season will start in January with the local FIRST kickoff event, which we plan to attend as a team. We will meet three days a week during build season to work on our robot. During our competition phase we plan to attend the Smoky Mountain and/or the Miami Valley regionals in March.

September	5, 12, 19, 26	Wednesday	Regular Team Meeting	2:30-4:00
October	3, 10, 17, 24	Wednesday	Regular Team Meeting	2:30-4:00
November	1	Thursday	Deadline for Grant Submission	11:59
November	9	Friday	Grant Announcement Celebration	2:30-4:00
November	14, 21, 28	Wednesday	Regular Team Meeting	2:30-4:00
December	5, 12	Wednesday	Regular Team Meeting	2:30-4:00
January	9	Wednesday	FIRST Kickoff	2:30-4:00
January	15, 16, 17	Tue-Thur	Design Session	2:30-4:00
January	22, 23, 24	Tue-Thur	Build Session	2:30-4:00
January	29, 30, 31	Tue-Thur	Build Session	2:30-4:00
February	4, 5, 6	Tue-Thur	Build Session	2:30-4:00
February	12, 13, 14	Tue-Thur	Build Session	2:30-4:00
February	19, 20, 21	Tue-Thur	Build Session	2:30-4:00
February	22	Friday	Robot Unveiling	TBA
March			Tournaments	

4. Outreach

4.1 Initial Plan

Since this is our inaugural season, we plan on reaching out to the community in two ways: a robot unveiling during school hours and visits to local middle schools. For the unveiling, we will invite our school board members to our auditorium where we will show our project publically for the first time. After the robot is built, we plan to take it to local middle schools for demonstrations. We will do mini robotic workshops using Parallax Boebots during those visits.

4.2 Future Outreach

After the competition phase, we will use our robot for a number of community events. Over the summer we will appear at the Champ Camp, a summer program for incoming freshmen named after Central's most famous graduate, Muhammad Ali. Next fall our makerspace will have a booth at the Louisville Maker Faire, and we will give robotics demonstrations throughout the event. We will also highlight the robot during the Jefferson County Public Schools' Showcase of Schools next October. It is our intent to continue to visit middle schools next year for workshops.

5. Marketing

5.1 Collaboration with Sports Marketing Magnet

We are fortunate that one of the magnet programs at Central is Sport Marketing. We intend to work with this class to refine our marketing plan. They can assist us with advertising, video editing, and graphic arts. Their expertise will be critical in allowing us to spread the word about the Centrons.

5.2 In-District Marketing

Part of our marketing plan will be an awareness campaign at both Central High School and the school district at large. We will primarily advertise in our school to attract new members. We plan to have a robot unveiling in February during a school assembly. After our initial year, we will solicit funding through our Site Based Decision Making council and the Jefferson County Public Schools Foundation. Through our middle school outreach, we hope to attract future Central students into our magnet program.

5.3 Sponsors

One of the biggest functions of our marketing team will be to solicit grants from local sponsors. Since our district has an endowment foundation, we are not able to ask the larger corporations in the Louisville area for funding. So we will focus our efforts on local colleges and businesses. Each sponsor will be printed in our advertising, featured on the side of our robot, and listed on the back of our team tee shirts.

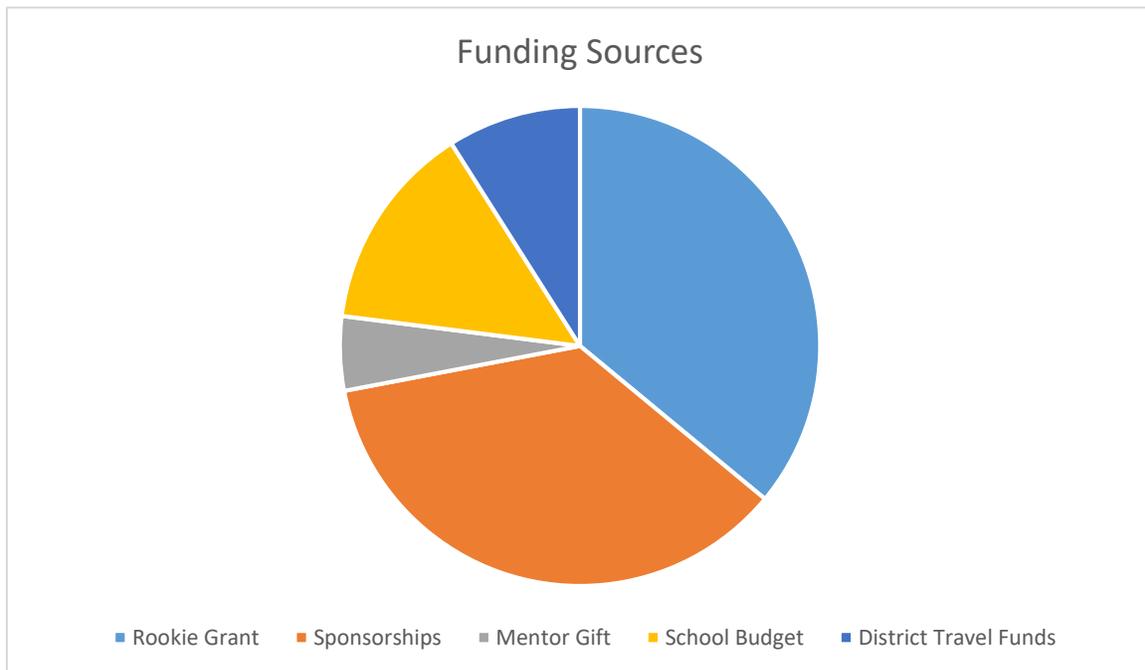
5.4 Social Media

The marketing team will be responsible for keeping a team presence in social media. After we have attained our grant, we will start a blog that tracks each team meeting. The Centrons already have a Twitter account which is telling the story of our multiple endeavors. We will also create a dedicated Instagram account and YouTube channel.

6. Finances

6.1 Funding Sources: \$11,000.00

Rookie Grant (First Year)	36%	\$4,000.00
Sponsorships	36%	\$4,000.00
Mentor Gift	5%	\$5,00.00
School Budget (from magnet program)	14%	\$1,500.00
District Travel Funds	9%	\$1,000.00



6.2 Sponsorships

We will sell our sponsorships on a tiered system. Our inaugural year goal is \$4,000. We feel confident that the success of the program will lead to more sponsorships for our second year.

Gold Title Sponsor - \$1000

- Robot: Large logo of business
- Banner: Large logo (displayed at events and tournaments)
- Team Shirts: Large logo on back of shirts (worn at events and tournaments)

- Website: Logo & link on sponsorship page and logo on first page

Silver Sponsor - \$500

- Robot: Medium logo of business
- Banner: Medium logo (displayed at events and tournaments)
- Team Shirts: Medium logo on back of shirts
- Website: Logo & link on sponsorship page and logo on first page

Bronze Sponsor - \$200

- Robot: Business card sized logo of business
- Banner: Small logo (displayed at events and tournaments)
- Team Shirts: Small logo on back of shirts (worn at events and tournaments)
- Website: Logo and link on sponsorship page

6.3 School Budget

Our magnet program has an account that can be used for purchasing. This funding can be utilized in the purchase of parts and supplies for the robot.

6.4 District Travel Funds

We will apply to the district for equity funding for travel expenses.

6.5 Gifts in Kind

We have a supplier that will print t-shirt, and all of our marketing needs (banners, flyers, etc.) will be produced by our school district.

7. Fundraising Schedule

September 5, 12, 19, 26	Marketing team meeting
October 3, 10, 17, 24	Marketing team meeting
October	Social media accounts created
November 1	Deadline for Grant Submission
November 9	Grant Announcement Celebration
November 9	Mentor and magnet funds added
November	Marketing team finalizes advertising
November – December	Marketing team contacts potential sponsors
December 14	Finalize sponsors
January	Travel expenses solicited from district
January	T-shirts and banners printed
January – February	Sponsors invited to build sessions
April	Year-end banquet – sponsors invited

8. Proposed Budget

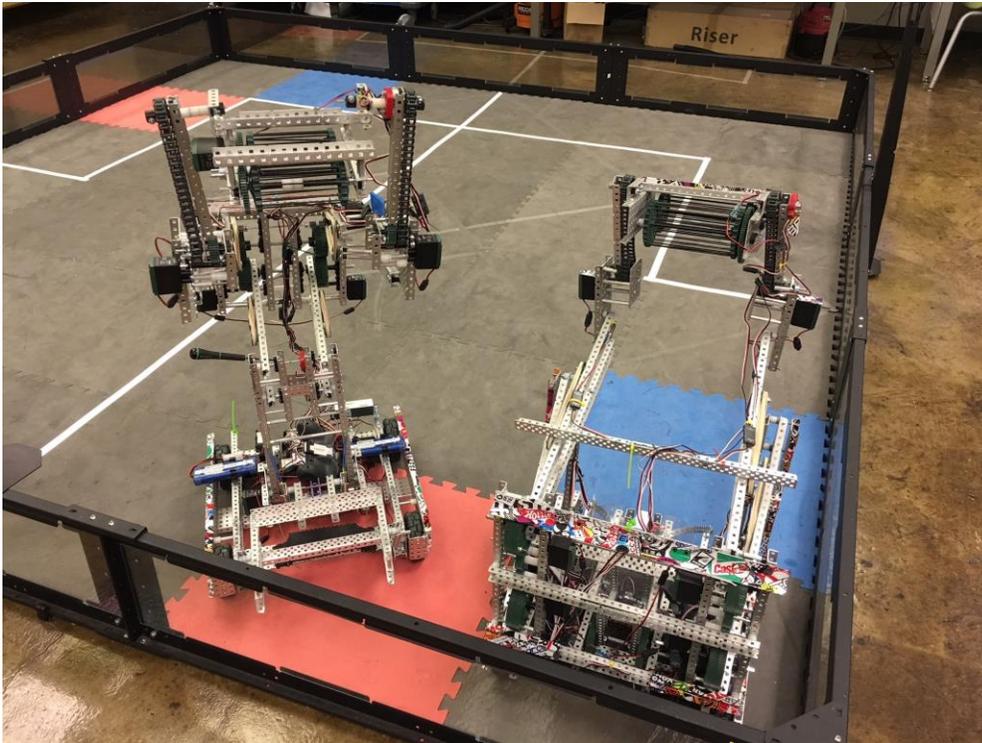
Competition and Registration Fees	
Rookie FIRST Registration	\$6,000
Tournament Fee	\$1,000
Robot Parts (estimated)	\$2000
Drive train	
Aluminum	
Electrical	
Control	
Travel Expenses (estimated)	\$2000
Gifts in Kind	n/a

9. Photos



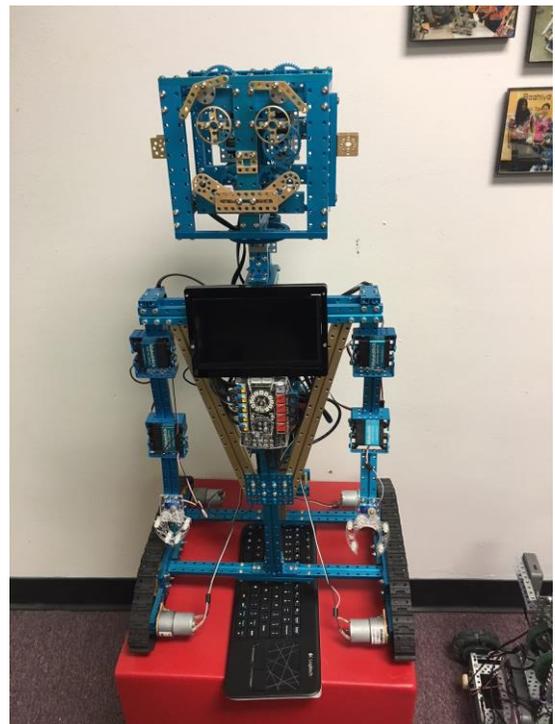
Our makerspace





Previous VEX Builds

Gillybot, our mascot (student programing platform)



Appendix. 2019 Balance Sheet

A.1 Projected Funding Sources: \$11,000.00

Rookie Grant (First Year)	36%	\$4,000.00
Sponsorships	36%	\$4,000.00
Mentor Gift	5%	\$500.00
School Budget (from magnet program)	14%	\$1,500.00
District Travel Funds	9%	\$1,000.00

A.2 Actual Funding Sources: \$11,160.00

Robotics Club Carryover Balance (2018)	4%	\$473.00
Rookie Grant (First Year)	36%	\$4,000.00
Mentor Gift	18%	\$2,000.00
UofL Grant	14%	\$1,538.00
VEX Tournament Fees	21%	\$2,330.00
Donations	7%	\$819.00

A.3 Expenditures: \$10,206.15

FIRST Rookie Fee	61%	\$6,200.00
Additional Parts	13%	\$1,338.00
Travel Expenses	26%	\$2,668.15

A.4 Working Balance: \$953.85