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1.0 Introduction

1.1 About FIRST

FIRST (For Inspiration and Recognition of Science and Technology) is a program designed to introduce young children and teens to STEM concepts. They work not only to increase interest in these ideas but to inspire teamwork and confidence.

1.2 FIRST Mission

The mission of FIRST is to inspire young people to be science and technology leaders, by engaging them in exciting Mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

2.0 Team Information

2.1 History of 2856

We are a team of ten dedicated high school students in Seattle, Washington. Since 2008, 2856 has been working to improve and develop Seattle Academy's Red Shift Robotics. Get Over It! in 2011 was the first year 2856 went to Worlds. We were an Inspire award runner up in 2015, an award given to teams who embody the FIRST spirit by excelling in all categories at the competition. We have advanced to the State championship for 4 years and this past year, 2856 went to Super Regionals! We didn't win any awards, but had a great experience overall. We are dedicated to teaching the mission of FIRST and not only growing in technical skills, but as a team.

2.2 Mission statement

Our mission is to improve our science and engineering skills while creating a working robot, working with mentors not only from the school, but within the tech community. We also want to spread the values and importance of FIRST within and outside the school to inspire others to follow their passions.

2.3 Goals

1. Have a competitive robot with a robust design that works consistently
2. Outreach to our community, both within STEM and outside
3. Be organized and communicative throughout the whole year

2.4 Team commitment

Last year's calculations show about 380 hours per person of work. We project even more this year. Our team practices at least 12 hours per week and people often work even when we don't have practice.

2.5 Team Organization and Communication

We have five mentors, four of which are teachers and one who is a parent volunteer. They help when expertise is needed. The team manages assignments of work through scrum, daily meetings to talk about what each person is doing. With scrum, everyone on the team understands what is getting done that day and is held accountable. The backlog board is another center of our communication.

There is a section for backlog, in-progress, testing, completed, and on robot. Each task is assigned a backlog note. The progress of each task is kept track of on this board.

3.0 Sustainability

3.1 Organization

The team moved into the new STREAM building this year. The beginning of the season was dedicated to building carts and boards to keep supplies and tasks organized. We also have scrum and a backlog. During scrum, we talk about our plan for the day before each practice. It is designed to keep open lines of communication throughout the team. In addition, the backlog is mounted on the wall and keeps track of everyone's tasks and how far they are to completion.

3.2 Budget

3.3 Training

2856 is the varsity team of Red Shift. Almost all members have reached this point after participating in one of the other two teams. On 6157, members learn the basics of building and programming while building their competition robot. Goals focus on the basic challenges in the process to be on the more advanced teams. 5619 is the same in some respects, but this team has more time to contribute. By the time a participant reaches 2856, they understand FIRST and the robotics process.

3.4 Fundraising

At the robotics workshop, Red Shift sold pizza and soda at lunch. We raised 210 dollars. In addition, at the league competitions, Red Shift sold concessions to raise money for the robotics team at Rotary Boys and Girls Club.

4.0 Outreach

4.1 Sponsorships

PACIFIC NORTHWEST METAL FABRICATORS

PacFab fabricated a chassis for 2856.

Pacific Supply Company donated a $50 gift certificate to Red Shift.

Being fans of GitHub, they gave us some free swag in return to support our team.

Starbucks provided coffee for the FTC workshop.

4.2 STAR Program

Recruiting for FIRST is a big focus of 2856. The STAR program was created in 2015 in order for high school students to teach to others to get them involved in technology. Its goal is to spread awareness, allow kids to have fun, and teach new ideas kids may not have been exposed to. It also works to promote FIRST within the community. By raising awareness for FIRST programs, the STAR program has created an FLL team and a future FTC team. It has inspired students to learn more about technology. With the STAR program, the team also works with Seattle Academy middle school to recruit them to FTC in the future.

4.3 Outreach throughout Seattle Academy

Robotics also presents to the school in various ways. During Seattle Academy open houses, hundreds of people wander through our room and learn about our robot. Red Shift also runs a robotics symposium. Our fourth year is coming up. It teaches technology concepts to students for a week after school. Finally, during the Club Fair at Seattle Academy, robotics had a stand and was able to recruit students for the teams. The school has a no cut policy, so people join robotics year round.

4.4 Outreach with existing FIRST teams

Red Shift runs a robotics workshop, which has just completed its third year. 100 people attended this year's workshop. They went to presentations about learning how to program, building, and game strategy. There were mentors and students presenting.

In addition, Red Shift inspired Rotary Boys and Girls club to create an FLL team. At the league competitions, Red Shift ran a concessions stand and raised money to donate to their team.

5.0 Resources