

Essay (please have this done 2/11)

- The essay portion of the Chairman's Award submission provides teams an opportunity to describe their activities & achievements in narrative form. While Judges encourage creativity of expression, the essay must clearly deliver information & facts describing what the team is about. Teams are encouraged to use some of this space to explain how their team is structured & the number of mentors & students on the team. The essay should avoid merely duplicating information provided in the executive summary questions. However, it is appropriate for the essay to further expand on those responses & provide more in-depth discussion of notable team achievements.
- The most effective essays are characterized by an overview of team activities during the last 3 years, followed by in-depth discussion of notable activities during the most recent 12-18 months. Judges use the essay to get a big picture view of the team & to learn about achievements that may be unique & noteworthy.
- 10,000 character limit

****add personal stories & how these things have impacted you*

(5740 being defined from our Mission & Vision)

KATIE

Dean's List

PACT

Women in STEM Day

Toy Adaptation (this needs to come last, JRs is going to flow from this)

JR

Seniors FIRST (this needs to come FIRST (lol), this is going to flow from my last topic)

Girl Scouts

Curriculum impact at school (this needs to be talked about last, AJs is going to flow from this topic)

AJ

Field trips (how that came from curriculum impact at school)(field trips/cap talks/mentorship need to come first because its going to flow from JRs topic of curriculum & career development)

Cap talks (how that came from curriculum impact at school)

Mentorship (touch on this lightly, we talk about it a lot in the short essays)

Full Circle (if you need help ask me & you can look at past essays & the book)

5740 is defined by our Vision to see our communities served by our team equipped with gracious mindsets & professional skill sets.

KATIE

5740 is defined by our Vision to serve our communities with gracious mindsets & professional skill sets. As a senior on the team, I have witnessed the impact of how our team builds students of creativity, leadership, & professionalism, which transforms us into hard working young adults prepared to excel after high school. The expansion of our STEM appreciation as a result of our Vision & Mission didn't happen overnight. Every member & alumni of 5740's 8 year history has been instrumental in the growth & creation of STEM recognition & opportunities through every initiative & interaction. We further these goals through FIRST expansion, STEM advocacy, student involvement, & service through STEM.

We have had great success in developing students in light of our Mission. This is evident through 3 members becoming Dean's List Finalists, including myself, & one Dean's List Award Winner. 5740 expects our members to carry the same traits in Dean's List nominees. 5740 builds students to become well-rounded individuals, preparing us for college & our careers. Not all of our team members see themselves with a STEM career; we operate as a small business & need their contributions. All students are impacted by STEM & FIRST, gaining authentic experience with problem solving & people. 5740 lets everyone know that FIRST is more than just robots, & we strive to make our team a home to all. Prior to joining 5740, I had no idea what I wanted to do. Being a part of both technical & non-technical subteams has made me want to combine my passions for engineering & business.

5740 strives to increase STEM awareness in our community & beyond. We started the Pennsylvania Advocacy Conference of Technology (PACT) with the goal of expanding STEM funding statewide. We met with local & state representatives, asking for their support of the PASMART funding bill. The bill was passed, allocating \$40 million to STEM education. PASMART has helped 750+ schools benefit from this funding. We also met with a local school board to talk to them about how they are able to utilize the PASMART bill. We have had many opportunities to spread PASMART. Our team presented at the State Advocacy Summit with 6 other FRC teams on how we effectively advocate PASMART & how others can begin to advocate with their own team.

My sophomore year on the team presented me with the opportunity to become involved with political advocacy. In 2019, we presented PASMART & PACT at the Three Rivers Educational & Technology Conference (TRETTC), as part of their student showcase. We spoke with administrators & educators on how they could apply for the PASMART bill & how they could use it to start FIRST teams & further STEM education. In 2021 we nominated our lead mentor for the TRETTC Innovation in Education Teacher of the Year award, which recognizes teachers who promote careers in STEM through their curriculum & foster cooperative relationships within their community. He won, validating the role of FIRST in education. We presented at TRETTC again in 2022, about making connections with industry professionals. We used our team as a case study to show "How many connections it takes to build a student". We advocated for programming within schools to follow FIRST's model for industry mentorship. We characterized connections as *Touch-point Partnerships*, *Meaningful Mentorship*, & *Authentic Apprenticeship*. We are proud to continue our relationship with the Pittsburgh Technology Council by being involved with TRETTC yearly.

As a woman on the team, I see the importance 5740 has on increasing female STEM involvement. 5740 had the opportunity in 2019 & 2020 (virtually) to send 4 girls to attend Westinghouse's Women in STEM Day, to learn from female role models in the STEM industry. I was grateful to be selected as one of the students to attend both years. At Westinghouse we learned about different STEM disciplines, toured their nuclear training facility, & attended a Q&A with their female engineers.

5740 wants to invite as many people into the family of FIRST as possible. In that spirit, we hosted a STEM learning experience for a troop of Girl Scouts. We helped the Daisy & Brownie troops earn their robotics badge. They had the spark of STEM in their eyes & it was wonderful to see the next generation of innovators inspired by us. At the beginning of the event, a girl scout was asked if she was interested in robotics & she said "no way". After the program, we asked the troop if they would be interested in joining robotics & the same girl scout was the first to raise her hand with much enthusiasm. At this moment, I realized the impact our robotics team has in influencing the community to love STEM. Through my 4 years on 5740, I have seen our team grow in numbers & inclusion.

JR

I had the amazing opportunity to get involved with our service through STEM initiatives. As a junior on the team, I have seen how 5740 strives to serve people of all ages. We built a connection with the Children's Home of Pittsburgh (CHP), so we could start an initiative of adapting toys for medically fragile children. We raised more than \$4000 & have adapted 25+ toys for this cause. We wanted to make our connection even stronger with CHP, continuing this amazing initiative. We did this by making CHP the focus of our Innovation Challenge project. We conceptualized Button Buddy, a device that increases communication & mobility. 5740 strives to reach out to everyone in our community, from the young to the elderly.

As part of our community initiative, Seniors FIRST aims to bring STEM to an overlooked elderly population. We visited 8 senior homes to introduce STEM, our robotics program, & demonstrate the robot. Our team showed the seniors how to use FaceTime & Skype to connect with loved ones, which later became a valuable resource during the COVID-19 pandemic. We enjoyed having interesting conversations with the seniors on the evolving technology & meeting with a 1955 alum of our own school. This initiative builds empathy within our team for marginalized communities.

5740's goal is to always serve others. Our Christian faith encourages us to bring Christmas spirit to an underserved urban community through an event called Christmas on Troy Hill. This event is run by our school, & 5740 is invited annually to assist. This year, we demonstrated our 2021 robot & the kids were astonished by the design. I remember talking with a young boy in 6th grade that asked if he could join a robotics team. I shared details about the many different robotics programs that FIRST organizes & he was very intrigued. It is wonderful to see the spread of FIRST & its message to people in all walks of life, & to contribute to the versatility of the message. The parallels between our Christian Faith & Gracious Professionalism offer ample opportunity to serve others through STEM.

One group we really wanted to serve was rookie teams, so we co-founded Full Circle (FC) with FRC 6814. FC is a website that is dedicated to mentoring rookie teams, who lack the resources & guidance needed to be sustainable. FC was created to help with both the technical & non-technical aspects. FC has also created a series of pamphlets, some of which were translated in Mandarin, so FIRST teams in China could get the help they needed. Along with mentoring on FC, 5740 has helped to start 21 FRC, 4 FTC, & 11 FLL teams. 5740 is always dedicated to expanding the FIRST community. Even after graduation 2 of our alumni are still actively involved as mentors.

AJ

As 5740 works to build students, I have witnessed the impact that we have made on our school's STEM curriculum opportunities. We are committed to building all students at our school, so we have coordinated with our administration to create STEM focused courses in our curriculum, including two computer science courses & a STEM Choice elective. STEM Choice provides students with an opportunity

for personalized learning within a particular field of interest. STEM Choice has allowed me to study traffic engineering & amusement park design. For the two computer science (CS) courses currently offered, students study the foundational concepts of CS while being challenged to explore how computing & technology can impact the world. In my senior year, I plan to broaden my current scope of the STEM industry by taking AP CS Principles.

FIRST Class Robotics (FCR) is a co-curricular elective that parallels the FTC competition season, which allows students to participate in the challenge during the school day, without having to commit to an afterschool activity. Students are allowed to take the course for a second year & function as leaders for the different subsystems of the team. Many students in FCR join 5740, wanting to grow their STEM knowledge. FRC team members act as student mentors for the FCR teams. As a student who took FCR before joining 5740, it showed me how to take engineering & design to the next level. I learned how to use CAD & even co-designed a subsystem. The following year I took FCR II to teach FCR I students everything I learned, which included a season with 5740.

Another component of our curriculum initiatives are organizing STEM field trips & guest speakers for any student wanting to learn about the STEM industry. From facility tours to round table discussions, students are able to see what it takes to get a job in that field & the unique characteristics it has to offer. We are also able to arrange for guest speakers to have informational sessions for students during the school day. I have attended several of these field trips & informational sessions myself & I can say that they have given me a unique insight into potential career options available to me. My favorite field trip was the MSA tour where we got to learn about the different safety equipment they produce and try on their various professional uniforms for a photo shoot.

I love this team, it has become a family to me & all of my teammates. WE ARE 5740!