



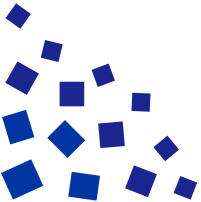
Girl

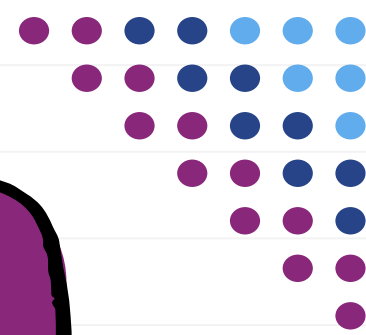
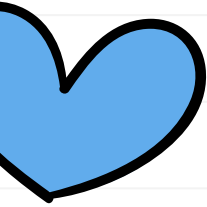


Powered



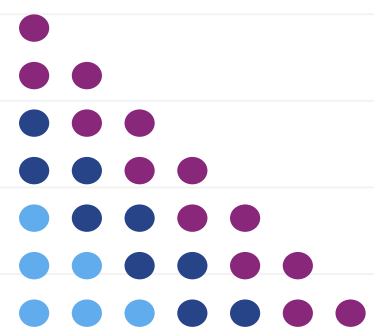
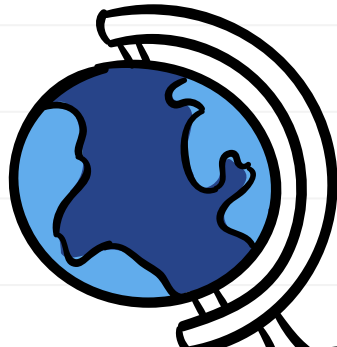
Changing up gender
norms in STEM with
4478T






“Diversity drives innovation - when we limit who can contribute, we in turn limit what problems we can solve.”

– Telle Whitney





There are significantly fewer women compared to men involved in the STEM workforce.

Underrepresentation of women in STEM is **everyone's** problem!



Diversity **Debugs** Difficulties



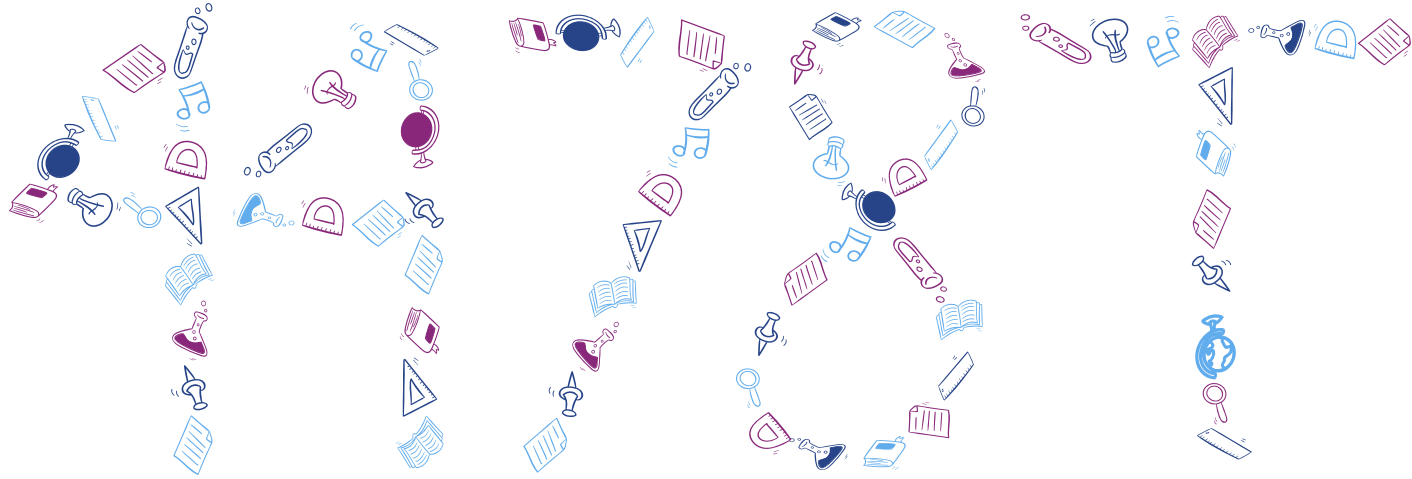
We support Girl Powered because it brings equality to STEM since women are drastically underrepresented in STEM fields!

Introducing STEM at a young age makes us all stronger and when awareness is spread, we can fix the issue of gender inequality!

We are stronger when we include everyone!

We support this movement, as we have seen the insurmountable effect it has had on everyone!

Together we can change societal norms! Girl Powered is an initiative that hopes to include more women in STEM jobs!

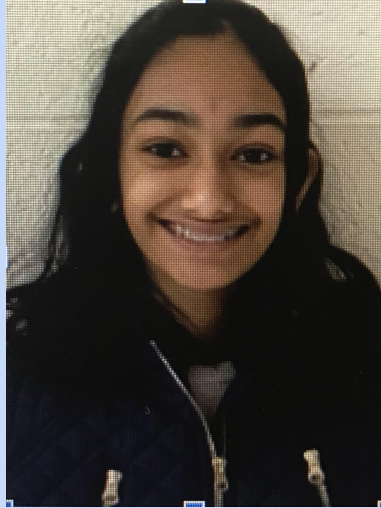


Together we can make a difference, no matter our age! We are all freshmen who are proud to be Girl Powered!

Meet the girls **powering** our team!



Andrea



Harini



Kaylee

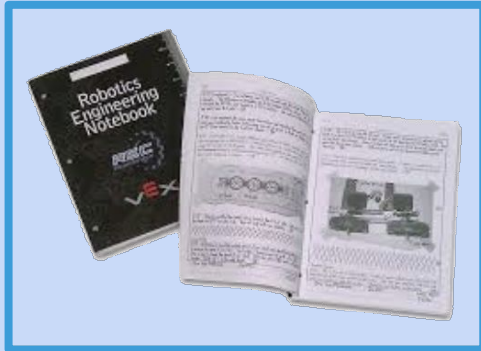
Andreea

Andreea is a freshman at Masuk High School. This is her fourth year of being in robotics. Throughout her years of robotics, she has focused on building and driving, assuming the role of main builder after her first year. She plans on continuing to be the main driver and builder and contributing to the notebook wherever applicable.



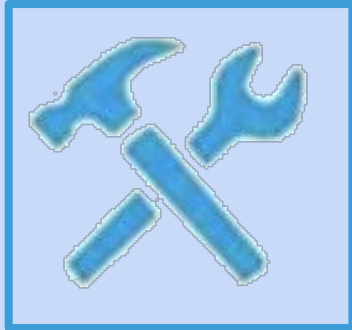
Harini

Harini is a freshman at Masuk High School, this being her third year in the robotics program. She has experimented with different roles in robotics, but she ultimately plans to focus on managing the engineering notebook this year.



Kaylee

Kaylee is a freshman at Masuk High School. This is her 4th year of robotics. For her first year she tried different roles and then became a main builder. This year, she will continue to work on the robot but will also enjoy explaining the engineering process in the notebook.



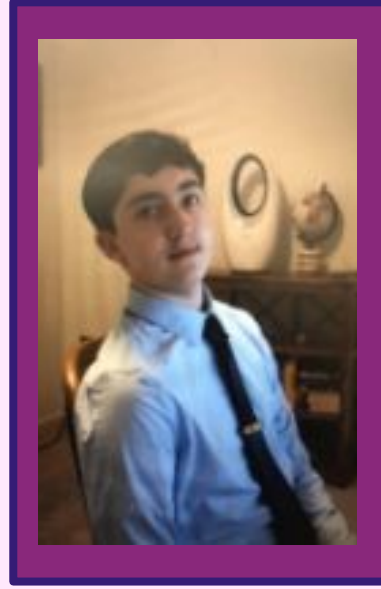
Meet the boys **wiring** our team together



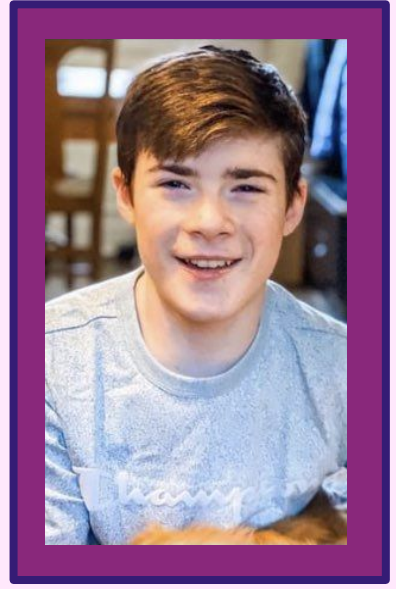
Bhuvan
Programmer



Anish
Notebook



Brayden
Notebook, CAD



Jackson
Scout, Builder

Starting with a strong **structure**

As an all freshman team, each one of us have been able to take **positive** aspects of our time in middle school **robotics** and use them to keep an open mind. In the past, we had to stay **motivated**, be **accepting**, and **communicate**. All of these **experiences** have led allowed us to learn what it means to be **Girl Powered**, and we are excited to keep these ideals moving forward in robotics.



With the “Girl Powered” initiative, we have been able to win awards and be competitive in the past. We hope to incorporate that with our current team.

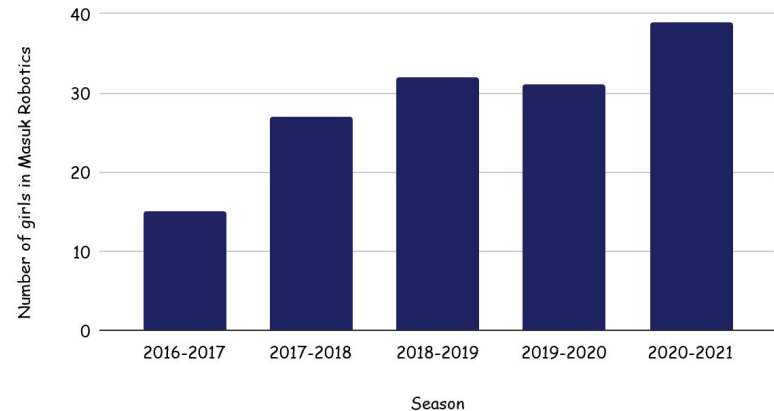


Inspired to Include



Inclusion is **paramount** within our team and our program as a whole. Our coaches **encourage** all teams in Masuk Robotics to accept anyone, no matter their gender, race, or ethnicity. Every year, our program **strives** to promote this message along with our recruiting efforts, which has paid off in these past few years.

Number of Girls In Masuk Robotics Over Time



Allied Against Prejudice!



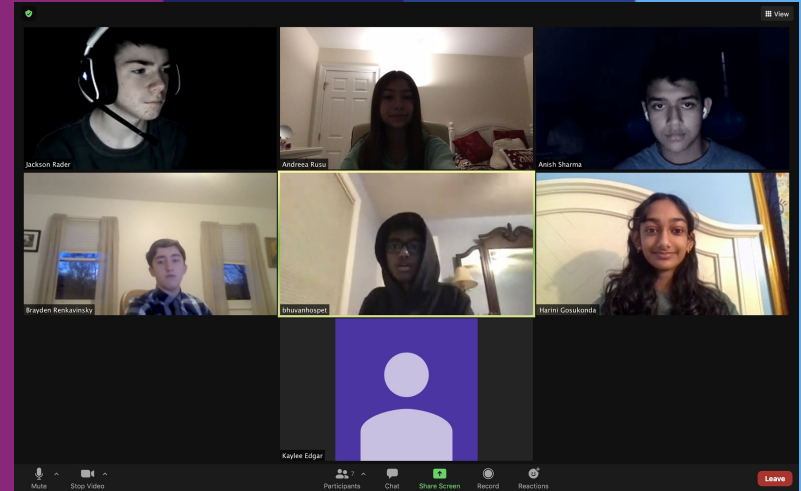
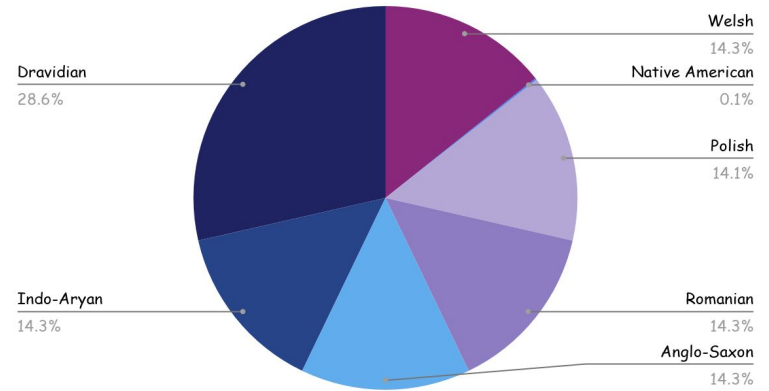
Our core values are **accepting** everyone and allowing them to reach their **potential**. We strive to **overcome** any problems we may face, **together!**

By having a regular rotation of tasks, all individuals on the team are offered an **equal** opportunity to find their true **passion**. To keep everyone informed, at the start of every session we discuss with our team members our plans and goals. Throughout this experience we have learned that each member plays a **unique** role in contributing to the overall **success** of the team.

Different perspectives **drive** us towards success!

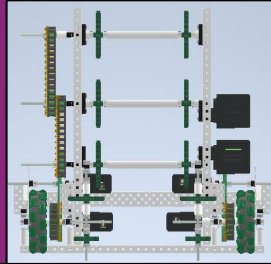
Our team is composed of **diverse** individuals with rich backgrounds, qualities, and strengths that ultimately provide various **perspectives** on ways to approach the challenges we face. Our **differences** make us **stronger** as a team, as we each **excel** in a particular area of robotics. When faced with a difficult situation, we ask for the **opinion** of all team members. This is because we have found that often the best **solution** to a problem is presented by a **diverse** team. On team 4478T, we accept everyone to create a safe environment for anyone to enjoy the fun of robotics!

Diversity in 4478T



Brainstorming

Over the summer of 2020, our team met many times to brainstorm ideas for our design through Zoom, making it more accessible for all of our team members to participate. Since it is our first year as a team, we had to take time to ensure everyone was comfortable with voicing their ideas.



Building

During the building process, a limited number of people were able to work on the robot due to the COVID-19 restrictions; but, as a team, we still took everyone's input and valued every member's opinion equally. We utilized prior brainstorming and as a team, we adapted to adversity and challenges that we faced during the engineering process.

Competing Against COVID - 19

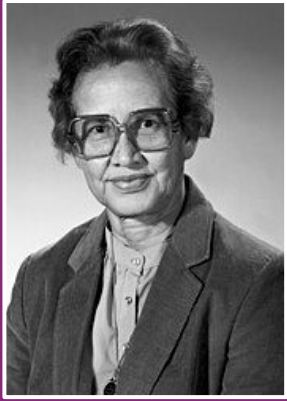
Coding

We make sure that all of our team members understand and can contribute to the code. One instance where we work together, is during the development of our autonomous routine, in which everyone works together to properly observe and test the code.

Notebook

The notebook is quite different than years prior, as we use an online notebook. Due to a lack of time together, the notebook helps us efficiently plan for the small number of work sessions compared to past years. This was both a blessing and a curse as we have less hands on time for construction but more planning time.

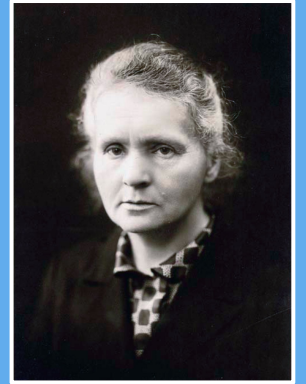
Empowering Exemplars



Katherine Johnson - A prominent African American mathematician who became famous as a NASA employee and was featured in the film "Hidden Figures." She is an inspiration to our team as she represents the importance of diversity in a field, and how it can lead to new ideas and success.

The phrase "girl power" radiates empowerment to all that can ascertain this powerful term. When our team reflects on girl power, many strong and independent women come to mind. These women have had to persevere through unfortunate conditions, but they were able to positively impact the world.

Powerful, independent women
positively impact the world!



Marie Curie - The first woman to win a nobel prize and the first person to win this award twice! She discovered the elements plutonium and radium. Her curiosity and drive to innovate in her field motivates us to keep discovering.



Powering Through a Competition

In our first and only **competition**, we saw many facets of **girl power**, as we brought our main builders, our driver, (Andreea, Kaylee) and a programmer (Anish). The rest would be **included**, however as we were all on a Zoom meeting **together** for the entire competition. The **support** of the entire team resulted in our **success**. We applied the ideas of Girl Powered by giving all members of the team the environment needed to **flourish** in their respective roles.



Scoring a victory through girl power

Girl Powered has made an observable difference within our team, **unifying** us into a non-discriminatory group. We all share a love and **passion** for robotics, and by being girl powered, we are able to **learn, interact, and enjoy** everything that we do. Having all of our members comfortable with the ideas of girl powered leads to an overall better product.



Forty two percent of women have faced workplace discrimination due to their gender.

It is paramount that we change all **of** that! It will be a long and hard road, but we can resist today!



Descoring Discrimination



Why should we **limit** certain people when the next great inventor could be a woman among us!

Re-education of all individuals should be implemented so that the severe consequences that sexism has on **women** are understood.

With the path of **oppression** cleared, young individuals can realize their true passion for STEM fields. This would increase participation, as we have seen first hand in our robotics program.

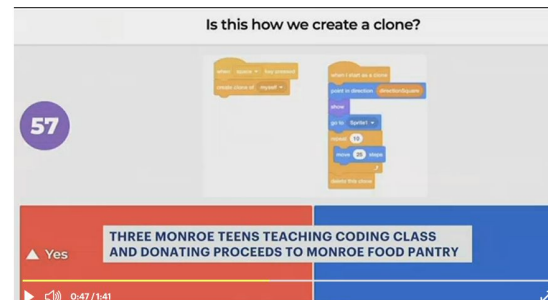
Producing a passion for **programming**

Girl Powered has been a large **factor** of our **success**, and we wished to introduce STEM to other kids in our local **community**. To do this, we hosted a summer camp in which we **taught** Scratch, a block-based coding language. We focused our camp on creativity, logical thinking, and problem solving, skills pivotal to a **successful** STEM career.

Scratch Summer Camp raises over \$2,000 for the Monroe Food Pantry

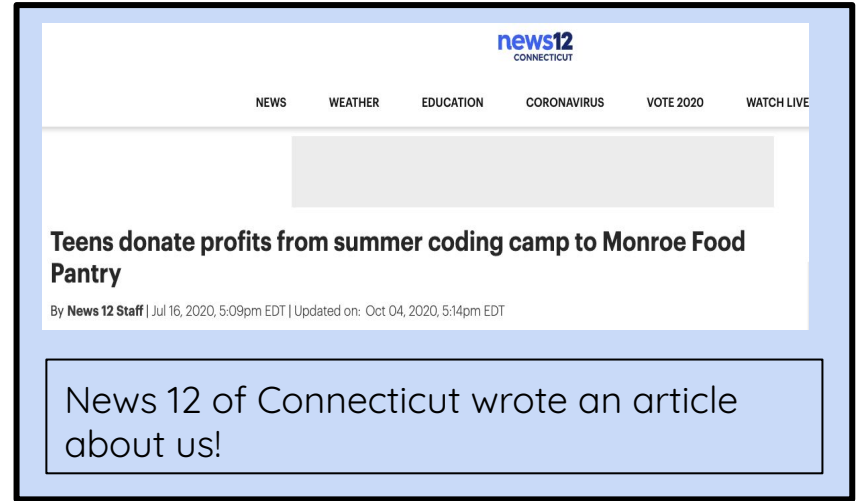
By Bill Bittar | October 12, 2020

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Coding For a Cause!

Our camp gained **recognition**, and the word got out to our area, allowing us to **educate** over 30 students, a mix of **both** genders. Lastly, we collected over \$2000 from the camp which we **donated** to the food pantry in our town. We hope that from our camp, more kids will **develop** an interest in STEM fields, ultimately reducing the **gender gap**. We hope to continue teaching and **helping** our local **community**!



Credits

Entrants: Andreea Rusu, Anish Sharma, Bhuvan Hospet, Brayden Renkavinsky, Harini Gosukonda, Jackson Rader, Kaylee Edgar

Team Number: 4478T

Title of Submission: “Changing up gender norms in STEM”

