Girl Powered

The Potentia of Girl Power

Presented by the 3383A Potentia members: Amelia, Elizabeth, Frances, HK, Jamie, and Nysa

Irvine, California

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Introduction

"...You win only if you're willing to do whatever it takes."
- Hidilyn Diaz

Out of many teams, one in particular represents hard work, perseverance, and dedication. This is how we, Team 3383A, Potentia, found out what we could offer to the STEM field. The members of such a team include Amelia, Frances, Elizabeth, Jamie, HK, and Nysa. Together, we make up the Girl Powered Team 3383A of Orchard Hills Middle School. While our experiences and backgrounds may vary, we come together to share one thing: our diligence.

A photo of our team!

Our team name, Potentia, is the word potential derived from Latin. It describes how our team wants to uncover the potential in everyone for the welfare of STEM.

“Leadership is about making others better as a result of your presence, and making sure that impact lasts in your absence.”
-Sheryl Sandberg

Our Beliefs

As a team, we believe that potential has no boundaries. This includes all people of different genders, backgrounds, and experience, as it is crucial to have diversity and be inclusive.

Our Hope

Our hope is for us to be one of the leading steps to *empowering girls* to enter the STEM field. We hope that our accomplishments will not only encourage *us* to continue to pursue STEM, but also empower other girls to seek STEM programs that satisfy their curiosities.

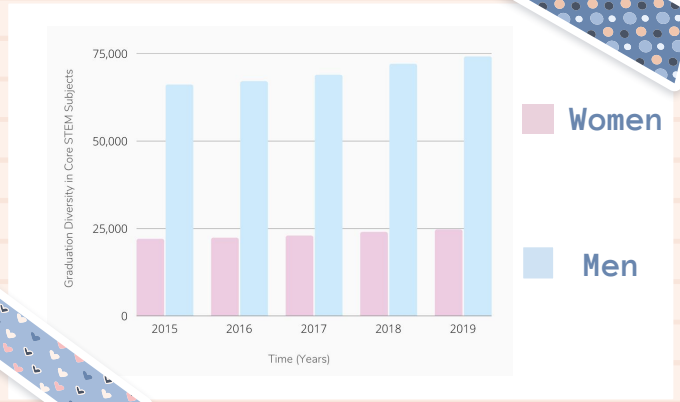
What Does Girl Powered Mean to Us?

> "A woman with a voice is, by definition, a strong woman."
> -Melinda Gates

To us, girl powered is more than a phrase. When we hear "girl powered," we remember the inclusivity modeled in STEM. In everything we do, especially in engineering, there will always be a mixture of all races and genders hoping to produce the same outcome: success.

As 3383A, we continuously aim to reflect such thoughts in our approach to robotics. We ensure that each member gets an equal opportunity at every role, as we believe that for an equal world, we must become the first to start the change. Through trying out the various roles presented in robotics, we hope to be the leading steps to such an impactful change.

Ultimately, the true definition of girl power is the environment created to *encourage* and *empower* young women to participate in the inspiring field of STEM.



This graph shows how, even in recent years, women are severely underrepresented in STEM.

Data From:
https://www.stemwomen.com/women-in-stem-percentages-of-women-in-stem-statistics

How Do We Reinforce Girl Power?

"Every woman's success should be an inspiration to another. We're strongest when we cheer each other on."
-Serena Williams

We reinforce girl power by promising ourselves to always work diligently to achieve accomplishments that not only inspire girls, but every individual looking to find a role in STEM. For us, girl powered is the opportunity to see girls like ourselves thrive. Consequently, we find ourselves reminding each other of what we are capable of; sometimes that being more than what we possibly imagined.

(Us winning the Excellence Award!)

“I never dreamed about success. I worked for it.”

-Estée Lauder

"Hope and curiosity about the future seemed better than guarantees. That's the way I was. The unknown was always so attractive to me… and still is." - Hedy Lamarr

Our S.T.E.M. Role Model: Hedy Lamarr

Hedy Lamarr is a truly inspiring woman. Her miraculous ways proved that she was a pioneering woman in the field of STEM. Lamarr modeled an incredible potential and zest that many girls look up to. She innovated major breakthroughs to help the U.S. military, with her revolutionary ideas eventually being used as a foundation for modern technologies like Wi-Fi, GPS, and Bluetooth.

We chose Hedy Lamarr to be our STEM role model as she influences us to remember that we must continue to have empowering faith in ourselves, and see the beauty of our own spirit and individuality. She is the perfect example of how one should not confine themselves to one idea, but rather should always explore their opportunities.

Clearly, Hedy Lamarr illustrates our team belief: potential has *no* boundaries. We set this as a foundational value for us as we want to hold ourselves accountable to understanding that being a woman in STEM is more than just contributing to the field. Rather, it symbolizes how we utilize our potential in numerous ways to pave the future. We ensure that nothing, especially our previous experiences and backgrounds, will restrict any of us from following such a meaningful value.

Putting What Hedy Lamarr Taught Us Into Action

Knowledge

From Hedy Lamarr, our team was motivated to have a positive and educational environment remain within us. We felt that we needed to put this new knowledge into action.

"When women work together, it's a bond unlike any other."
- Victoria Principal

Knowledge in Action

Our team won the Excellence Award in our first state-qualifying tournament. Through the many hours we spent working together to continuously discussing new ideas, we believe that we attained this award. We hope that this accomplishment inspired girls at our tournament to remember that they can do anything they put their minds to.

"Don't be intimidated by what you don't know. That can be your greatest strength and ensure you do things differently from everyone else." - Sara Blakely

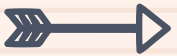
How Do Team Members Get Assigned Various Roles?

Assigning Roles

When assigning roles to team members, we take in account of each and every member's unique strengths, weaknesses, and even personality to choose roles that are fit for them. During this time, we remember and acknowledge the importance of never confining any member to only one role.

Different Roles

Every team member explores many different roles to uncover their *true* potential. By doing this, we feel that team members can fully learn and deepen their understanding of robotics. Furthermore, various perspectives on ideas enables not only our robot, but us as a team to thrive and reach our maximum success.



We discovered our potential through various roles, such as...

Building

Amelia ...through working with Heather to make the drivetrain and chassis.

Elizabeth ...by the trials and error of building the accumulator and flywheel.

Frances ...through building the rubber band expansion arm.

HK ...by building the chassis, drivetrain, and accumulator, as well as modifying the ramp.

Jamie ... through working on the flywheel with Nysa and Elizabeth.

Nysa ...by developing our flywheel and swing arm, alongside Elizabeth and Jamie.

Programming

Amelia ...by observing, analyzing, and revising the code made by others.

Elizabeth ...through helping to code the RPM for the flywheel.

Frances ...through coding the main subsystems of the robot with Heather.

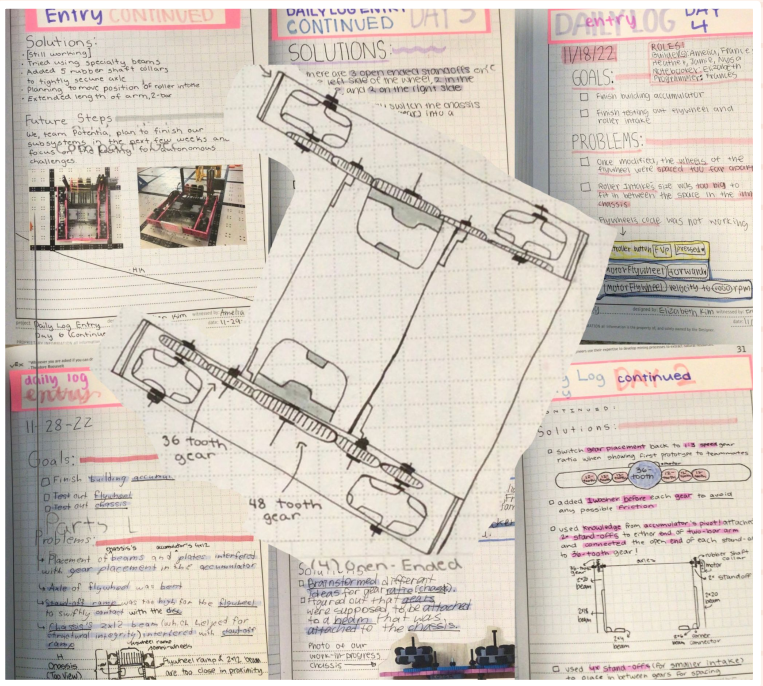
HK ...through coding the main subsystems of the robot with Frances.

Jamie ...through revising and perfecting code made by others.

Nysa ...by learning how to code from the guidance of others.

Notebooking

Amelia ...through writing daily logs.
Elizabeth...by documenting our team's progress following the Engineering Design Process.
Frances ...through notebooking daily logs.
HK ...by drawing models of subsystems.
Jamie ...through writing the tournament analysis.
Nysa ...by notebooking our trials, errors, and presenting ideas related to the notebook.



Driving

Frances ...by driving our robot at a competition, alongside Nysa.

Nysa ...by driving our robot at a competition with Frances.

Directing

Amelia ...through managing the team's progress with time constraints in mind.

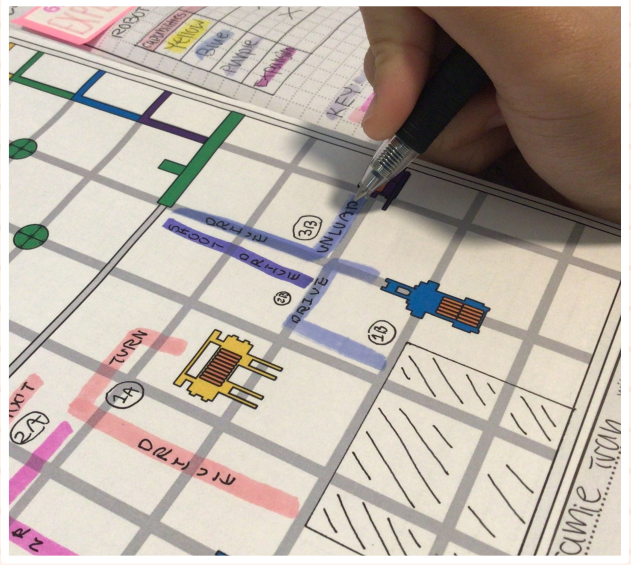
Elizabeth...by directing the strategists to meet with alliances, like a scout.

Frances ...through directing the Promote Video for online challenges.

HK ...by managing the structure of the robot.

Jamie ...through directing game strategies with alliances.

Nysa ...by creating multiple strategies according to the features of our robot.



I discovered my potential in the field of STEM...

Jamie

...by understanding the importance of trial and error, and actively participating.

Nysa

...by learning many new ideas and utilizing them in everyday tasks.

Elizabeth

...through exploring the possibilities through roles of what I could do.

Continued

Amelia

...through learning from hands-on experience.

Heather

...by building and trying out different prototypes.

Frances

...through trying different things and learning from others.

Conclusion

Girl power is a key idea that everyone has to open up their minds to. Specifically for us, we model our willingness to showcase our girl powered charisma through discovering everyone's potential— both in our team, and for all those beings in the ever growing STEM field.