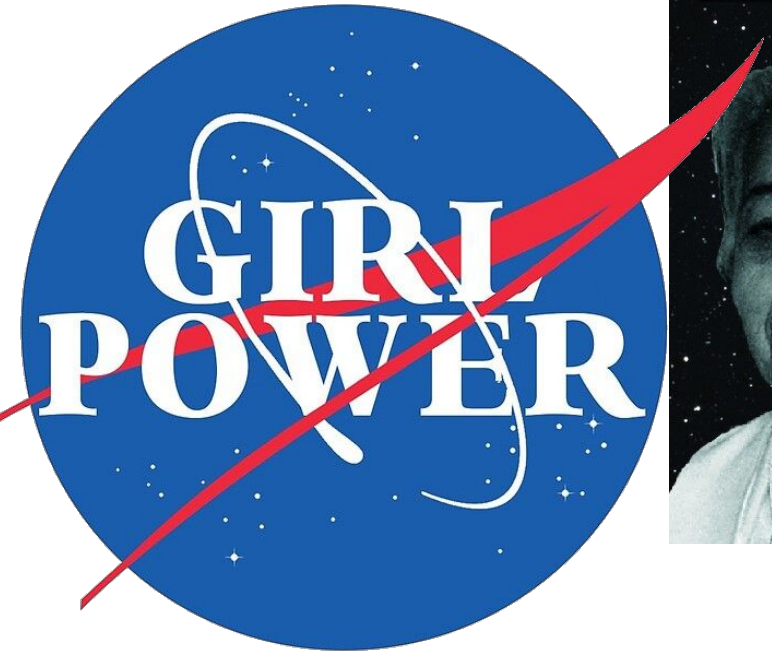
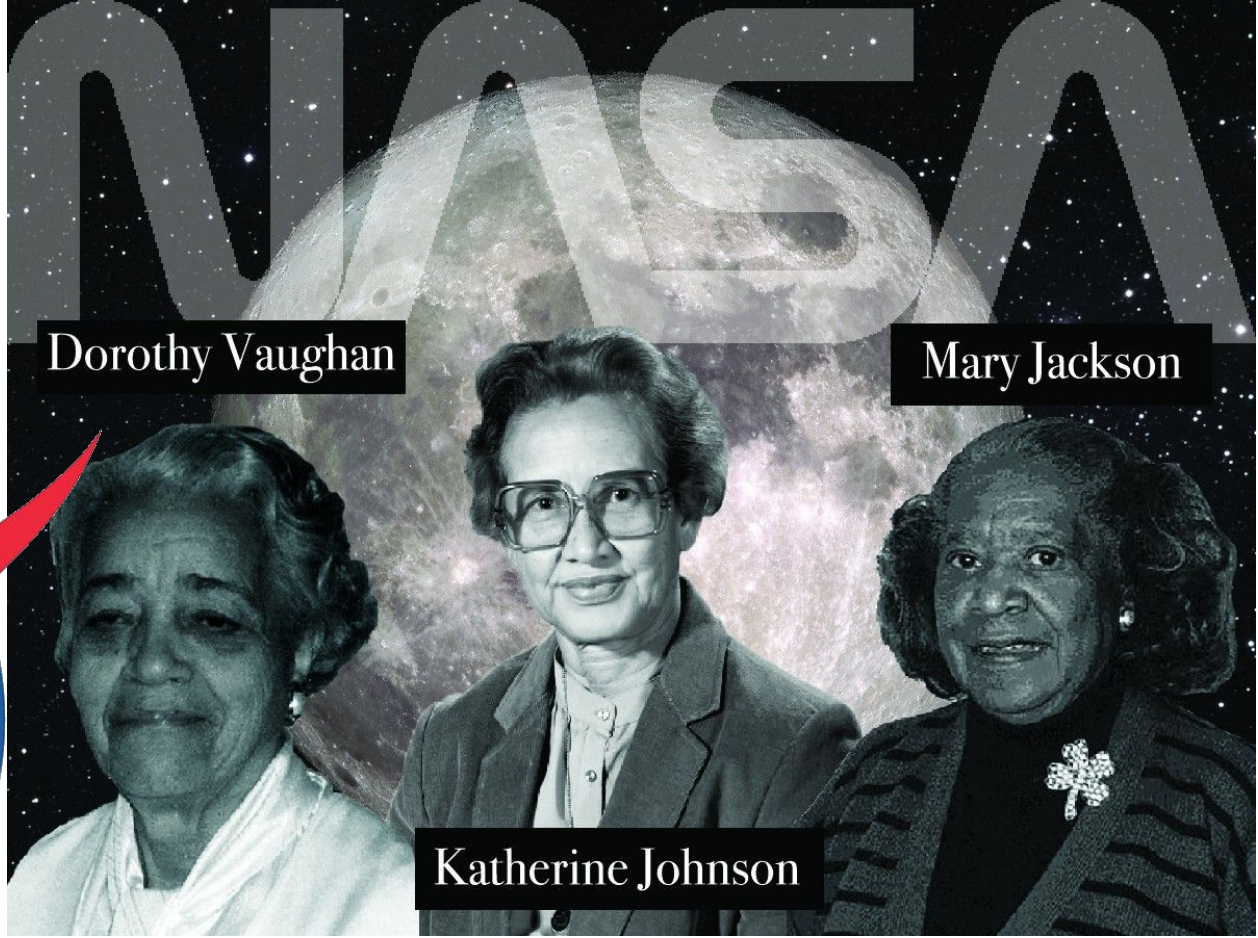
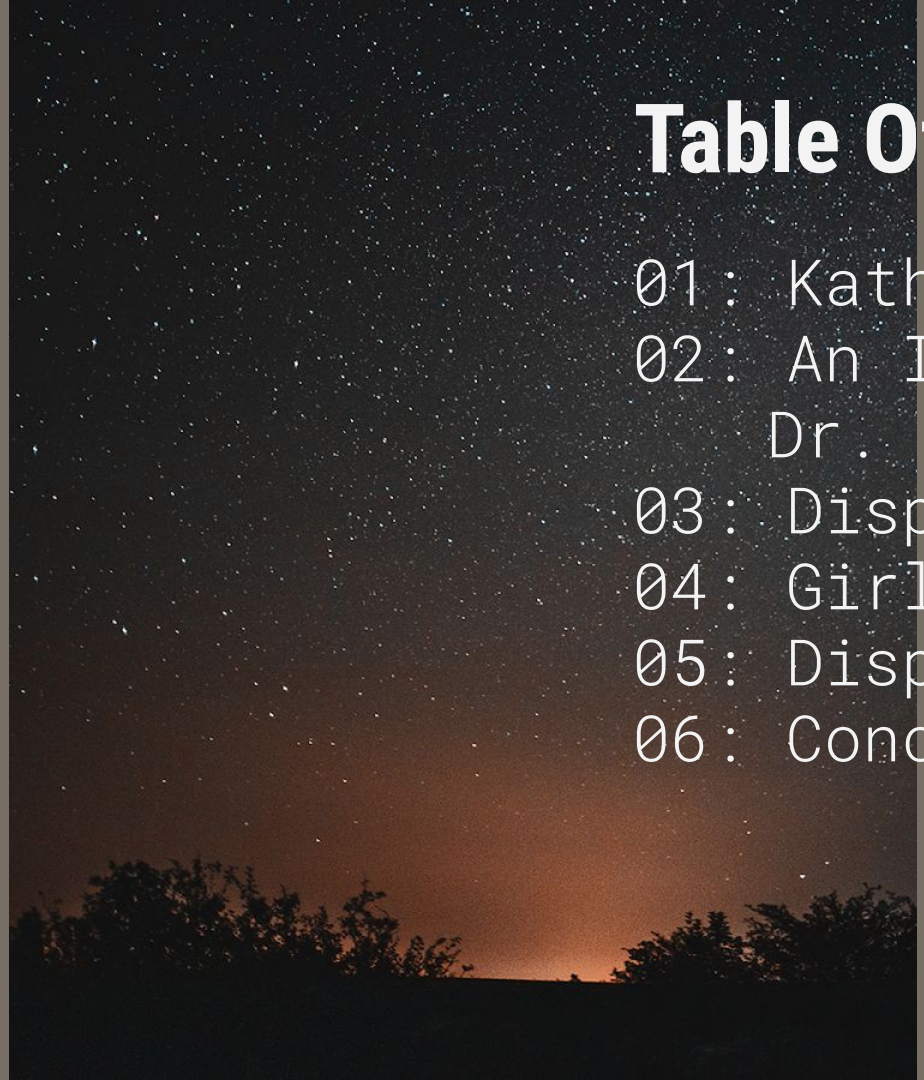
The Future of The World Is In Our Hands







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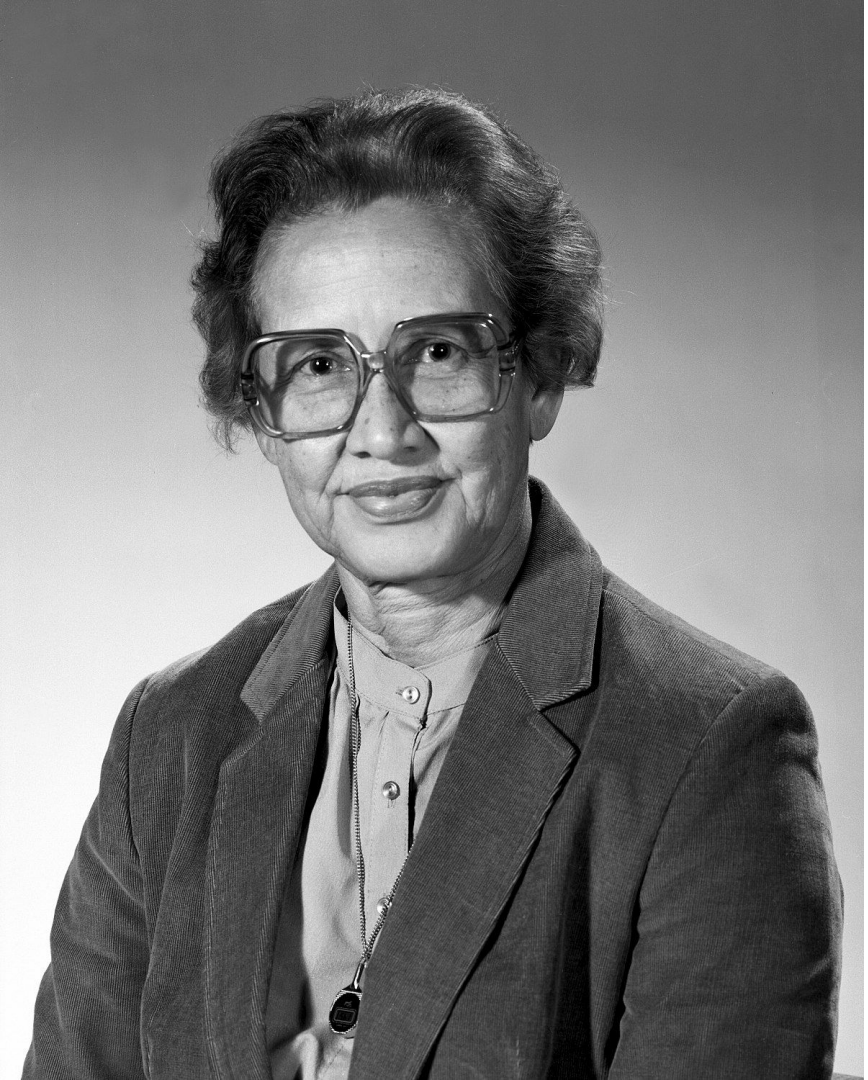


01

Katherine Johnson

We are Sophie and Yunji from the VEX IQ team 3383B Pi. We want to become a person like Katherine Johnson to fulfill our goal at NASA.

Katherine Johnson

I am the one of the first women to work in NACA, transformed to NASA during World War II and from then on. From the start, I was a math whiz. I could perform advanced computations easily and calculated rocket trajectories. I made history on this day.

My heart is thumping, everyone around me in Mission Control is anxious. Today is the day when the Mercury mission is put to action. I hear a phone bell ringing, a fellow engineer picks it up.

"Get the girl to check the numbers," Astronaut Glenn says.

He is talking about me. Excitement fills up as I realize I matter. I am a woman, a woman of color who is respected in what used to be an all male field. I have fulfilled my goal.

02 Interview With Dr. Martha Hanner

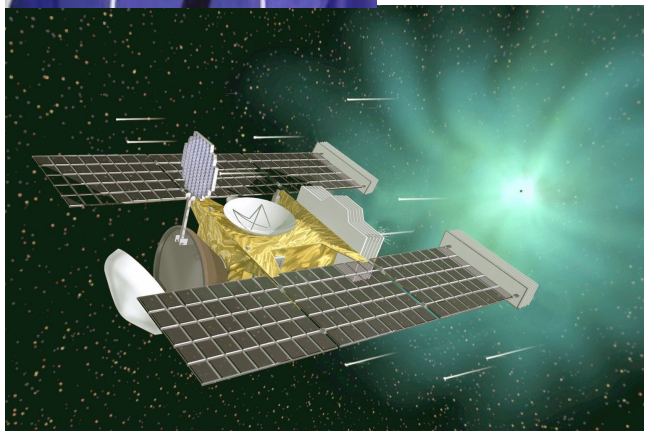
Our dream is to become an astrophysicist in the future. With the help of our CORE teacher, Mrs. Gullo, we have interviewed a JPL research scientist.

An Interview With Dr. Martha Hanner

Dr. Martha Hanner was a woman pioneer at NASA. She worked on many missions during her period there and was a research scientist at JPL. According to nasa.gov, she is “...the Leader of the Asteroids, Comets, Satellites Research Element.” Currently she is retired and teaches at UMass, The University of Massachusetts Amherst.

An Interview With Dr. Martha Hanner

The Stardust Mission ↓



What work did you do at JPL?

"I retired from JPL more than a decade ago, while Spirit and Opportunity were still roving Mars. I now live in Massachusetts, where I've been teaching at UMass. As you already know, JPL is mainly focused on Mars exploration, designing the instruments and rovers for future missions and proposing what is the next interesting science to be done. JPL also works on spacecraft and instruments to explore the other planets in our solar system, such as a future mission to Jupiter's moon Europa. Scientists there also help design instruments for earth. The engineers and scientists at JPL are not NASA employees, with guaranteed salary. That means, you either have to be paid to work on a specific project or write your own proposal to NASA to receive a grant to pay your salary for your research. During my years there, I worked on the Galileo mission to Jupiter, the ESA mission to Comet Halley, the Stardust mission, and I wrote proposals to get grants to cover my research on comets."

An Interview With Dr. Martha Hanner

What was the most interesting mission you took part in?

"You asked what was the most interesting mission I worked on. Definitely, the European mission to Comet Halley (the Giotto mission) was the most exciting for me. I was among the scientists present at the control center in Darmstadt Germany the night that Giotto flew past the nucleus at a distance of only a few hundred km.

Because Comet Halley has a retrograde orbit around the Sun (opposite from the motion of all the planets), the spacecraft zipped past at about 68 km per second. Scientists from many countries contributed instruments and expertise to the mission and were present at the control center that night. The experiment I worked on recorded the impact of the small solid grains from the comet that struck the front shield of the spacecraft."

03

Dispute

Part 1

“For good ideas and true innovation, you need human interaction, conflict, argument, and debate.”

All is wrong. Our team has become competitors. We are no longer allies. Somehow, our opinions are split, 3:2. Three boys to two girls. Because of a project, our team is already in danger of collapsing. Using both of our compassion for robotics we decided to take the strong, hard, persuasive route. This did not work. Instead, boys got more power as they decided against us, their decision. Although no one is more right, no one is more wrong, the balance of power is not there. It’s just not happening in this case.

We have another meet tomorrow. I don’t want to fight. Instead, working to become united and equal is our goal.

What happens next? Please keep reading to find out more. Will we work this out?

04
Girl Power

On the right, Mary Jackson's in the wind tunnels. ➤

“Girl Power”

When we hear the words “girl power”, we think of the empowerment of girls and the balance and equality between both genders. Girls have power and we want to prove our strength.

“There is no force stronger than a determined woman.”

When people say “girl power” it reminds us that we can do anything we set our mind to. This mindset has influenced our approach for robotics by ensuring we know that just because we are girls doesn’t mean we can’t achieve the same things as boys.

05

Dispute

Part 2

“Kindness Is Power.”

Before we enter the meet, both of us take deep breaths, from screens far away.

We think the same, *this meet needs to be different than the last.*

We feel every second, every moment, and take the time to concentrate on our breathing.

Counting, in and out, repeat.

We click to join the meeting. Game on. But this time, a different kind of game. A game of empathy, kindness, and consideration for one another.

We embrace our members with our cheerful laughs that seem to fill the void.

“Compassion Is Power.”

When gathering our whole teams’ ideas, it really brings our presentation together to form a star. That’s what we have learned, even if we have disputes in the future, girls will be able to pave the road ahead, and help our team succeeded by uniting together. Even if we are not heroines from books, as everyday role models for all girls, we face these challenges and get through them by persevering.

Team Chemistry

Even from these small disputes, our team learns and improves. To create an girl powered environment, we all decide our core values that make up our character. When teammates of both genders contribute to the team then we have a collaborative, structured environment where we all support and are able to rely on each other.

Team Chemistry

Our team members switch roles, we see everyone's style playing out. While our other teammates Iain, Nathan, and Vik are of the opposite gender, they work forwards. Most recently, Iain assembles our slides and videos, Nathan includes information into our projects and helps greatly with our script layout, and Vik contributes to writing and researching.

Sophie fills the pages with many facts that are crucial to our success. Yunji is the idea generator for the team as well as having a trick for layouting. Our roles all link together.

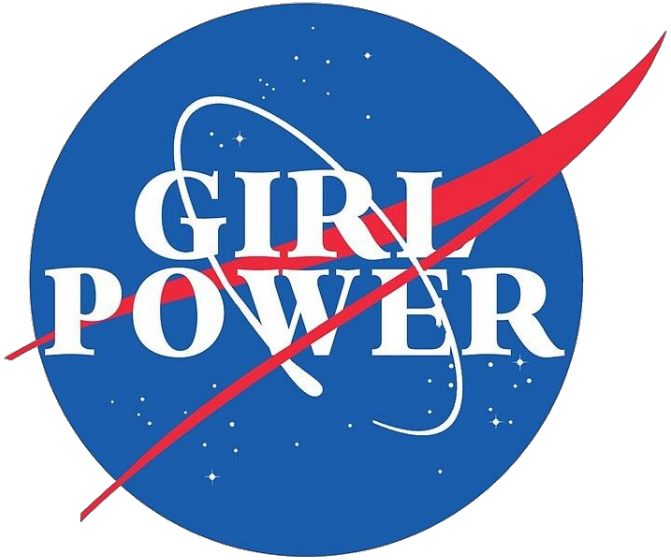
The best part of having a team is there's always someone there for you. You immediately feel fueled up when someone is supporting you.

06
Conclusion

Sophie and Yunji are one step closer to impacting the future. Our reality is whatever we decide is true.

"You can close your eyes and see the world you want, then open your eyes to create that reality."
-Abbie Emmons

We have dared to decide our future. As we stare up into the neverending cosmos we dream that one day our imagination will be transferred to reality. Everyone's perspective is different, but the one commonality. The will to persevere. In the words of girl power, we will pursue our dreams.



Credits

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Entrants & Created By: Yunji Lee and Sophie Shah

Team 3383B Pi

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4.https://www.astro.umass.edu/people/faculty/martha-hanner
5.https://nerdsagainstfandomracism.tumblr.com/post/157250483286/original-lineart-before-edits-photoshop-for-mary
6. https://www.nasa.gov/content/mary-jackson-biography
7.https://www.theepochtimes.com/nasa-names-dc-headquarters-after-first-black-female-space-race-engineer-mary-w-jackson_3401302.html
8.https://www.etsy.com/listing/781908809/katherine-johnson-nasa-mathematician?ref=landingpage_similar_listing_top-3
9.https://www.nasa.gov/press-release/nasa-names-headquarters-after-hidden-figure-mary-w-jackson
10.https://www.merriam-webster.com/words-at-play/teeming-vs-teaming-usage
11.https://www.nasa.gov/press-release/nasa-s-newest-astronauts-ready-for-space-station-moon-and-mars-missions
12. https://customtshirtshops.com/product/girl-power-nasa-custom-hoodies-quote/

Text Credits

Book:

Shetterly, Margot. Hidden Figures. New York: HarperCollins, 2016.

Websites:

1. https://stardust.jpl.nasa.gov/news/bio_mhanner.html
2. https://www.astro.umass.edu/people/faculty/martha-hanner
3. https://www.girlpowerrocks.org/
4. https://www.americangirl.com/explore/articles/our-purpose-your-girls-our-world-character-counts/
5. https://www.harvardmagazine.com/2008/01/girl-power.html