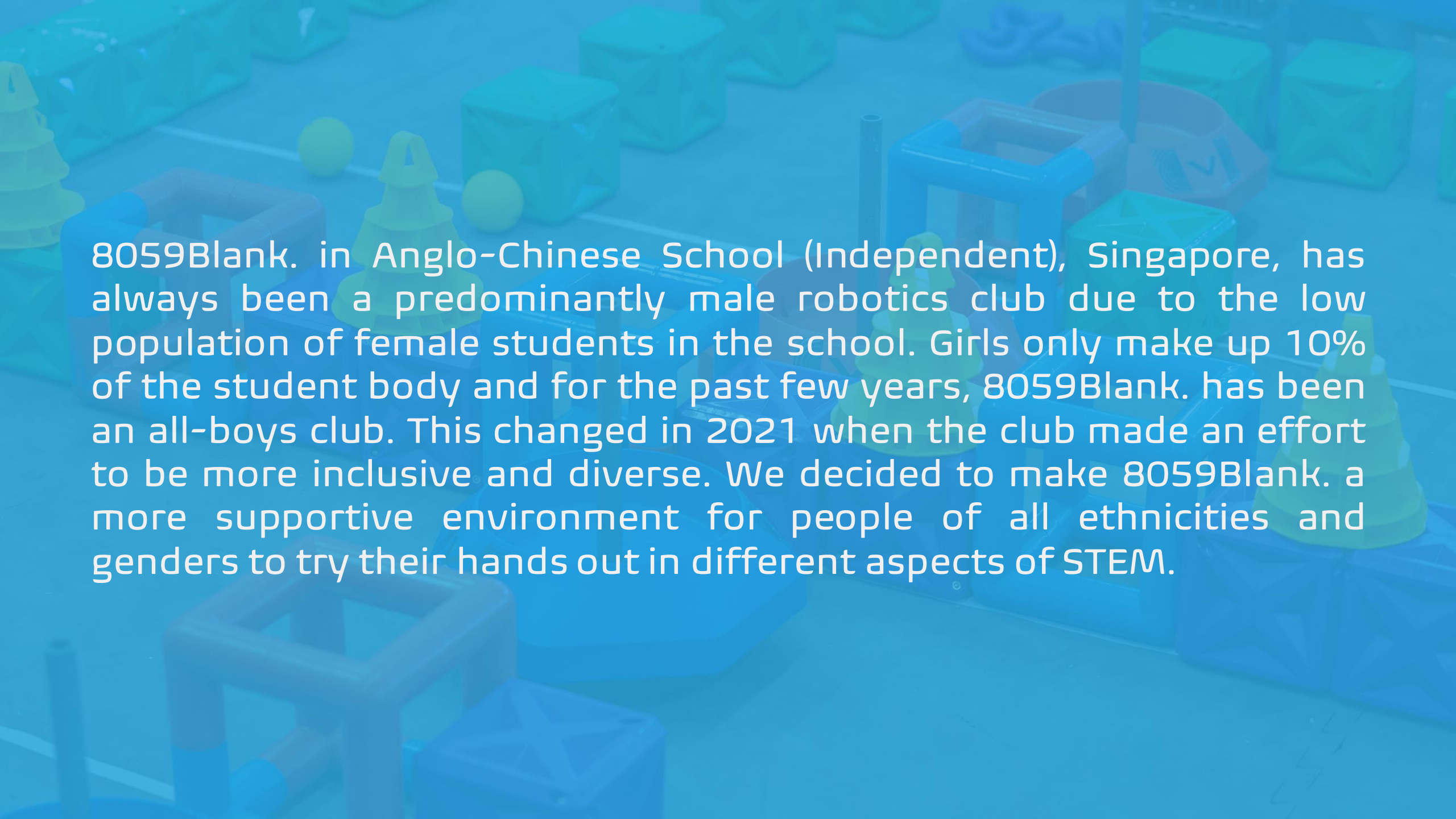


GIRL POWERED

TIPPING THE SCALES

8059B
FROM SINGAPORE

Written by:
Nicholle



8059Blank. in Anglo-Chinese School (Independent), Singapore, has always been a predominantly male robotics club due to the low population of female students in the school. Girls only make up 10% of the student body and for the past few years, 8059Blank. has been an all-boys club. This changed in 2021 when the club made an effort to be more inclusive and diverse. We decided to make 8059Blank. a more supportive environment for people of all ethnicities and genders to try their hands out in different aspects of STEM.

Our team, 8059B, consists of 4 members: (starting from the left) Marcus, Rachel, Nicholle and Akash. We only formed our team at the start of 2021, but it has quickly become our second family. We all come from different robotics backgrounds so when combined, we have a deep wealth of various skills, knowledge and experiences.



TEAM BACKGROUND

Rachel used to be in a VEX team in her home country of China and was recruited by the club through direct admission into the school. She has extensive knowledge about programming and being a driver.



Marcus has been in 8059Blank. for the past 4 years and has been very welcoming to us newcomers. He is a driver and specialises in designing and building robots.



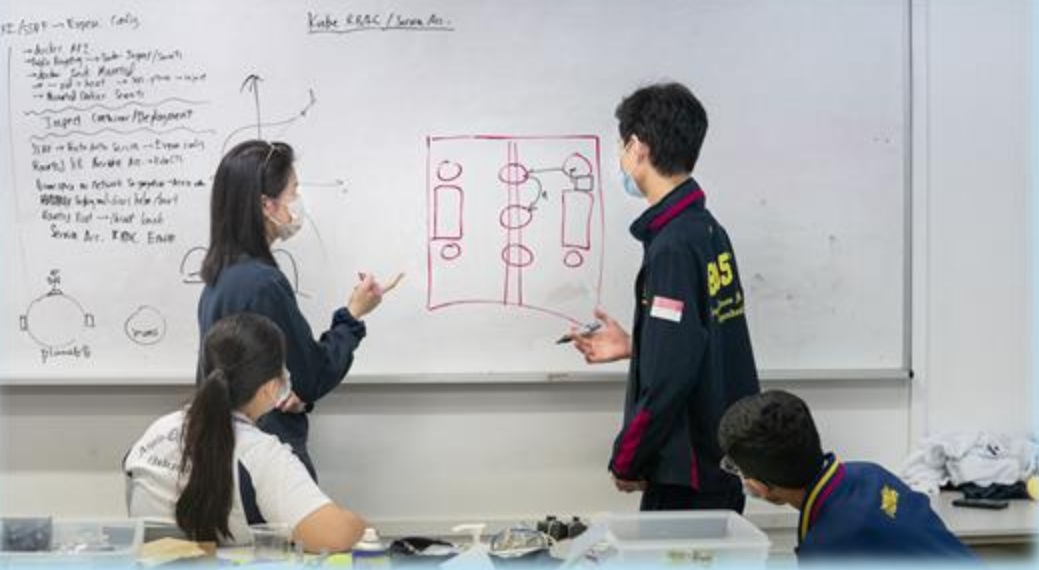
Nicholle was part of a middle school VEX team in her secondary school and was recruited by her senior who also joined 8059Blank. She has vast experience in 3D modelling, building, programming and coaching.



Akash is new to VEX but is a veteran in LEGO Mindstorm and was inspired by Nicholle, his ex-classmate, to join the club. Under the guiding hands of Nicholle and Marcus, he has quickly become an invaluable builder in our team.

TEAM CHEMISTRY

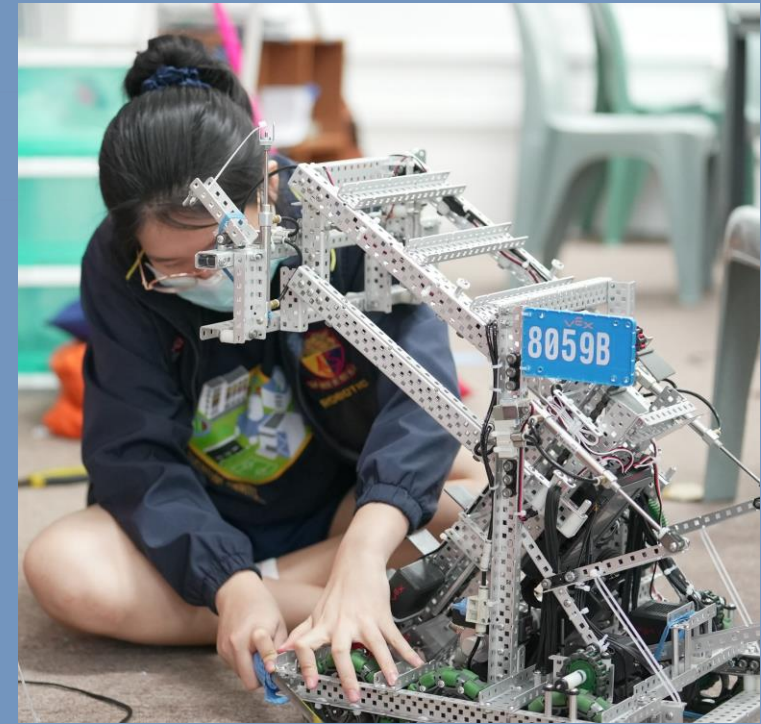
All of us collaborate together because we believe that we balance each other out with our different perspectives and skillsets. Hence, we are all equals in the team and wholeheartedly respect each other. During discussions about the robot design, we take into account our different backgrounds by ensuring everyone's opinions are heard. We also take turns leading each other through the different stages of preparation for a competition. Firstly, the builders lead the team in prototyping new designs for the competition. Then, they guide the team in building the robot.



Next, the programmers take charge to program the robot. Finally, the coach and driver manage the team a few days before and up till the competition by doing training drills and coming up with strategies. This process has allowed us to combine our knowledge effortlessly and even led to us winning 1st place in the Singapore National Vex Robotics Competition Skills Challenge.

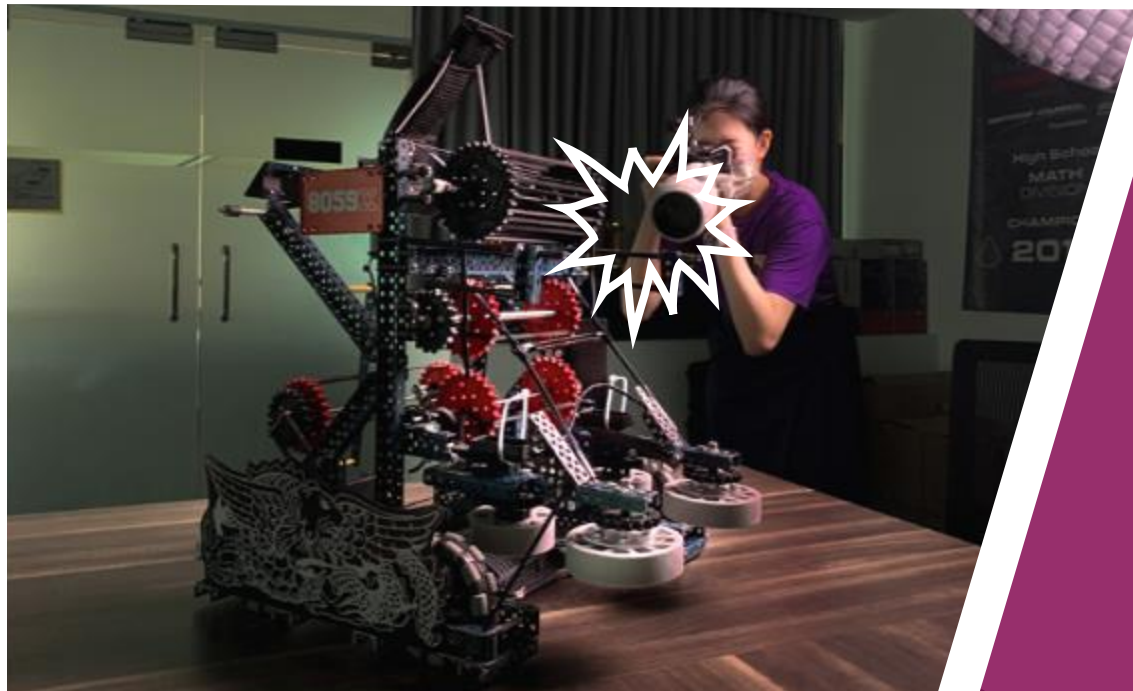
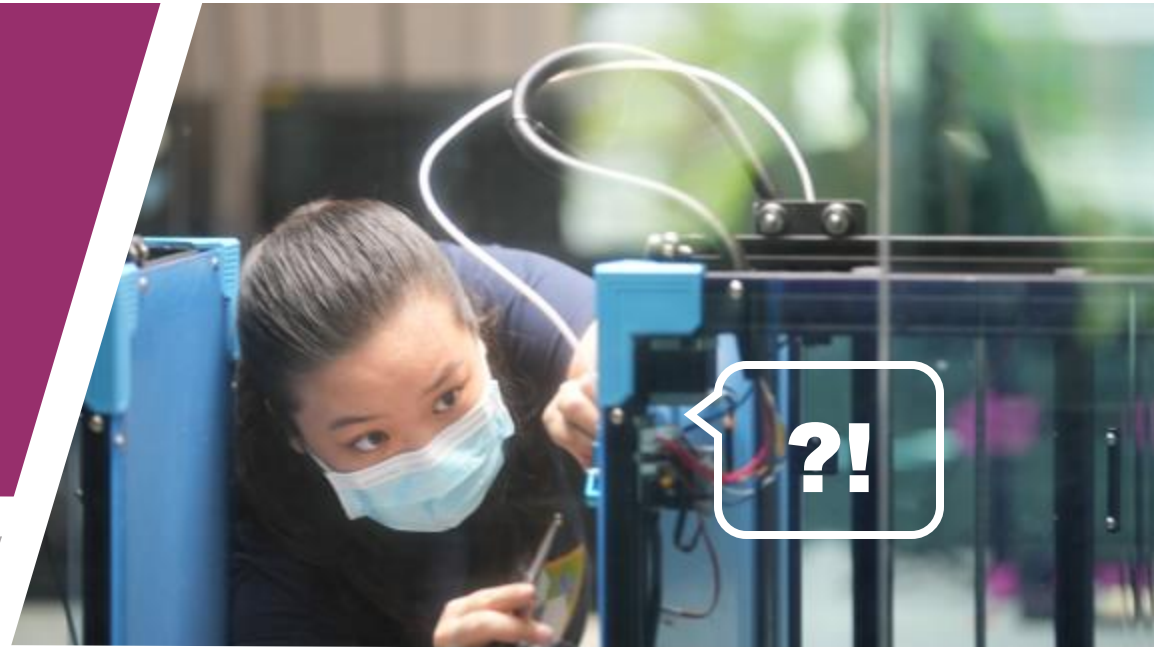


Even though we all have our own 'specialities', we do not have set roles in the team. All of us help the team whenever and wherever we can. We support each other in exploring different tasks in the team like prototyping and driving the robot. During our fortnightly team meetings, we discuss what we have done the past 2 weeks and what we would like to do for the next 2. This way, we get to pursue our various passions in STEM and are able to fill in for each other if someone is absent.



Experiencing the different sides of being in a VEX team has allowed us to gain a better understanding of our strengths and weaknesses. We also learn to put ourselves in each others' shoes and be more considerate towards each other. Motivating one another to explore our interests in STEM extends past VEX.

Nicholle is the Vice-Chairperson of another part of 8059Blank., Tech Squad, which focuses on designing products using digital making tools like 3D printing and electronics. She has been given the opportunity to be a leader and contribute to the club with her experience in 3D modelling.



Rachel is part of the Corporate Communications of 8059Blank.; she helps with publicity of the club, and promotes it to other students, especially girls interested in pursuing their interests in STEM. . We have learnt a lot from these different experiences and are able to bring a host of new skills back to VEX: 3D modelling, programming, electronics and soft skills including creative thinking and communication within a team.

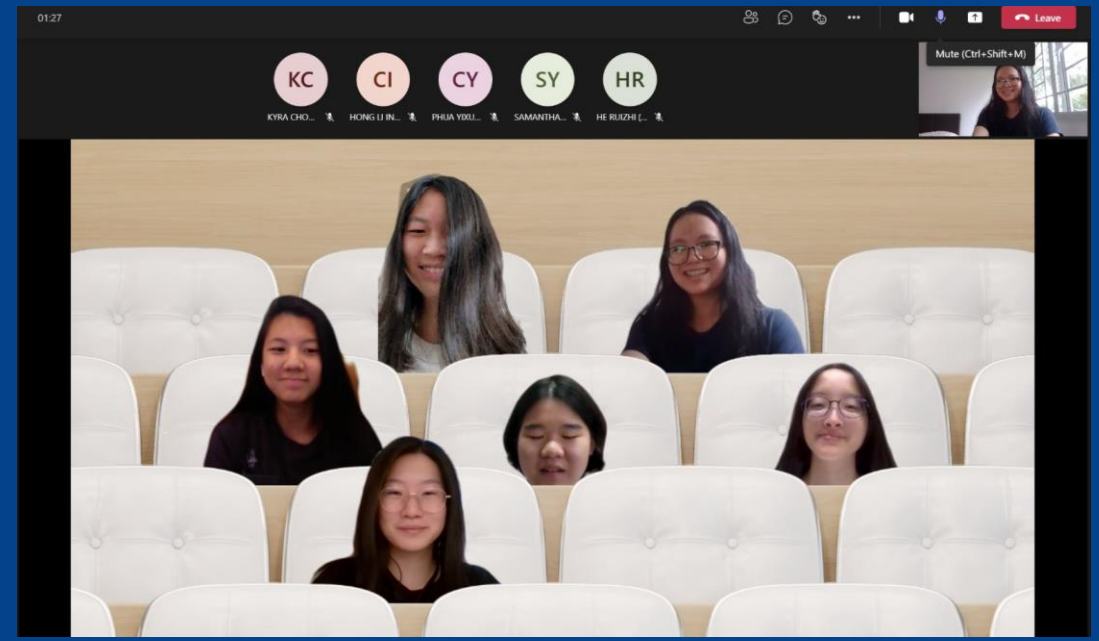
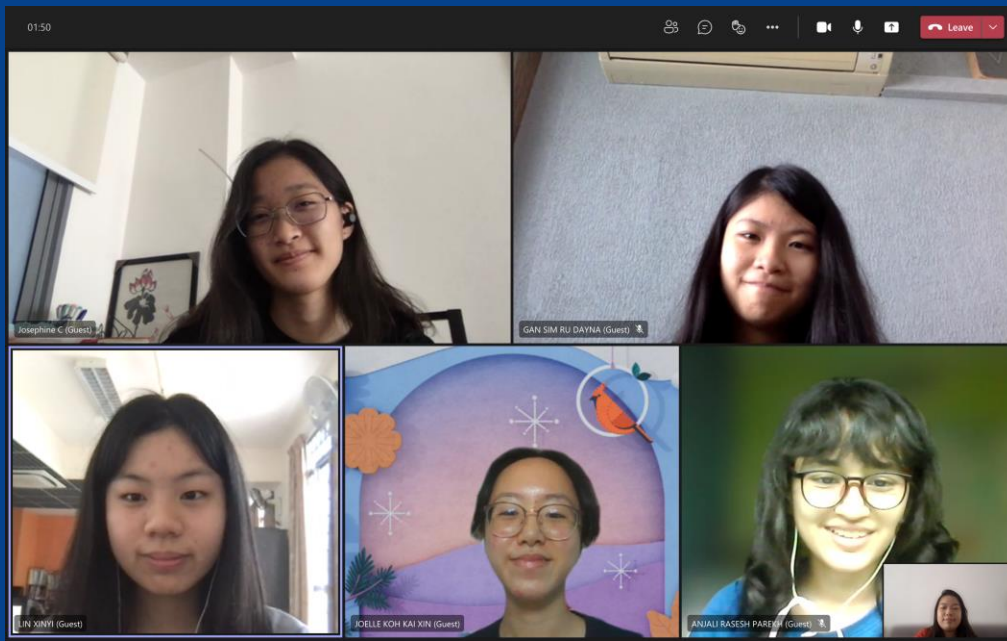
INSPIRATION



Whenever my team talks about creating a more inclusive environment for girls and people from various backgrounds, we always think of Sierin Lim. She is an outstanding Associate Professor of Bioengineering at the Graduate College, Nanyang Technological University Singapore. She is also leading the Bioengineered and Applied Nanomaterials Laboratory. Not only does she have a prolific scientific research career, but Ms Lim is also a strong advocate for females in STEM. She started Women@NTU and co-founded the Promotion of Women in Engineering, Research, and Science programme. Through her mentorship, outreach to different females and other contributions, she has empowered many females to explore their passion for STEM. She has inspired our team to change 8059Blank. for the better. We draw confidence from her when approaching other members in our club and discussing how we can improve our club culture and set new goals to become an even more inclusive club.

NOW

As we look back at 2021, we are proud to say that we have Tipped the Scales with Girl Power. The addition of Nicholle and Rachel has made 8059B an invaluable team to the club and has made Tech Squad and Corporate Communications better too. We have come very far from being an all-boys club and are still working towards influencing other girls to enter STEM through our various methods of outreach. ActionBots, a competition allowing participants to build their own 3D printed combat bot to battle in an arena, is organised by Nicholle and Rachel. It gives other girls in our school a starting point to experience STEM activities and learn from them. When we heard about the Microsoft Digigirlz competition, we reached out to other girls interested in coding and formed teams with them to join the competition. We are also recruiting our ex-schoolmates to join 8059Blank., so that they can enter and thrive in STEM.



Now in 2022, when we hear the term 'Girl Powered', we think of our team and how we have been able to create safe spaces for females to be themselves. To us, 'Girl Powered' means providing resources for females to experience how rewarding STEM can be. 'Girl Powered' means giving girls opportunities to explore their interests in STEM without fear or judgement. 'Girl Powered' means empowering girls to dare and be unafraid of doing what they love, so that they can make their fair impact to the world.

