



FIRST GLOBAL CHALLENGE 2023 SINGAPORE



7-10 OCTOBER SINGAPORE EXPO



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 #FGC2023SINGAPORE

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JOIN OUR MISSION:

BE A SUPPORTER >

WELCOME TO THE 2023 FIRST GLOBAL CHALLENGE

It is an honor to welcome you to the 2023 *FIRST* Global Challenge! We are delighted to bring the world together in Singapore, the host country for this year's challenge. We chose Singapore because this beautiful island country is a perfect example of how innovation and collaboration can create a pioneering nation.

We are immensely grateful for the leadership and engagement of our title sponsor Lam Research, and Dr. Phillip Yeo, Chairman of Economic Development Innovations Singapore, and others in the Singapore community. We are proud to introduce thousands to Singapore's distinctive character, and its leadership in the transition to renewable energy.

Over the next four days, student teams from more than 190 nations will compete and collaborate in a robotics challenge themed on renewable energy. They will put their STEM skills to the test, building robots that will replicate the process of dividing hydrogen and oxygen from water molecules, storing them in separate containers, and bringing them together in a symbolic generation of energy.

Yet this is about so much more than robots. It is about the spirit of cooperation that brings these kids together – across languages, cultures, and borders. It teaches them success requires working together. It is here that they learn to put aside their differences in pursuit of a common goal. These kids are our future. Innovating solutions that will save our



planet and ensure a cleaner, more equitable energy future is not possible without them.

We also mark a new chapter of *FIRST* Global with the introduction of the Declaration of Interdependence and its accompanying Bill of Responsibilities. Together, these documents represent the foundational credo of *FIRST* Global. We are a community dedicated to the cooperative pursuit of a more peaceful world. Together, we ensure the life, liberty, success, advancement, and happiness of all who share our planet. This year's students will be the first signatories – a visible commitment to our interdependence and the responsibilities we all have.

While closing ceremonies will mark the end of the challenge, our work does not end here. In a year-long *FIRST* Global program, students learn about renewable energy, have access to cutting-edge technology, and then develop their own innovative solutions within their communities and nations to create a cleaner energy future.

I remain convinced that our best hope is to inspire and support youth world-wide in uniting to solve the world's most complex challenges through science and technology. Thank you for joining the *FIRST* Global community.



DEAN KAMEN FIRST Global Founder

EVENT SCHEDULE

SATURDAY 7 OCT

18:00 - 19:30 Opening Ceremony

SUNDAY 8 OCT

14:00 - 16:00 Ranking Matches

MONDAY 9 OCT

09:00 - 13:00	Ranking Matches
13:00 - 14:00	Lunch
14:00 - 18:00	Ranking Matches

TUESDAY 10 OCT

- 09:00 12:30 Ranking Matches
- 13:00 14:00 Lunch
- 14:00 18:00 Playoffs, Finals, Awards, & Closing

2023 AT A GLANCE

34+ FEMALE-MAJORITY OR ALL-GIRL TEAMS

37% FEMALE PARTICI-PATION

67+ COMMUNITY

8

OUTREACH INITIATIVES

Singapore

85+ RENEWABLE ENERGY PROJECTS

7



Empowering Future Generations to Transform the World with Technology

Today, the world runs on semiconductors. Integrated chips are critical to millions of applications -- think about 5G, autonomous vehicles, supercomputing, and AI. At Lam Research we make the complex tools that make these game changing technologies possible. And tomorrow there will be even more.

The semiconductor industry is expected to grow to \$1 trillion by 2030. We're looking for the brightest minds, most passionate personalities, and creative thinkers to not only help us solve the most challenging and complex technical problems -- but to deliver solutions sustainably to ensure we create a better tomorrow. That's why Lam Research has stated our ambition to achieve 100% renewable electricity by 2030 and net zero by 2050.

Lam Research has pledged \$10 million to support *FIRST*[®] Global's mission to engage young people around the world in science and technology. We believe in this mission and are committed to supporting *FIRST* Global in achieving their goal.

We're proud to welcome students and guests to Singapore for the 2023 *FIRST* Global Challenge, where Lam has been an active member of the community for three decades. In Singapore and in labs around the world, Lam is boldly taking on some of the biggest technology challenges the world has ever seen, working at scales 1,000 times smaller than a grain of sand.

On behalf of Lam Research, I wish you the best of luck this week as you compete – and work together – to test the limits of what's possible. I'm also pleased to share in your excitement as you, like us, push through the next frontier to see what's on the other side.



Nerk.

Stacey MacNeil Chief Communications Officer & Group Vice President ESG





DART Cobotics

Kindness is a universal language. #FGBOR

Singapore

2023 FIRST GLOBAL COMMUNITY



ONE PLANET, ONE ALLIANCE



NATIONS REPRESENTED

Afghanistan Albania Algeria American Samoa Angola Antigua and Barbuda Argenting Armenia Aruba Australia Austria Azerbaijan Bahamas Bangladesh Barbados Belarus Belize Benin Bermuda Bhutan Bolivia Bosnia and Herzegovina Botswana Brazil Brunei Darussalam Bulgaria Burkina Faso Burundi Cabo Verde Cambodia Cameroon

Canada Cavman Islands Central African Republic Chad Chile People's Republic of China Colombia Comoros Conao Democratic Republic of the Congo Cook Islands Costa Rica Côte d'Ivoire Croatia Cuba Cyprus Czechia Denmark Diibouti Dominica **Dominican Republic** Ecuador Egypt El Salvador **Equatorial Guinea** Eritrea Estonia Eswatini Ethiopia

Fiji Finland France Gabon Gambia Georgia Germanv Ghana Great Britain Greece Grenada Guam Guatemala Guinea Guinea-Bissau Guvana Haiti Honduras Hong Kong, China Hope (Refugees) Hungarv India Indonesia Islamic Republic of Iran Irad Ireland Israel Italv Jamaica Japan Jordan

Kazakhstan Kenva Kiribati Republic of Korea Kosovo Kuwait Kyrgyzstan Lao People's Democratic Republic Latvia Lebanon Lesotho Liberia Libva Lithuania Luxemboura Madagascar Malawi Malavsia Maldives Mali Malta Marshall Islands Mauritania Mauritius Mexico Federated States of Micronesia Republic of Moldova Mongolia Montenegro Morocco Mozambique Mvanmar Namibia Nepal

Netherlands New Zealand Nicaragua Niger Nigeria North Macedonia Norway Oman Pakistan Palau Palestine Panama Papua New Guinea Paraguay Peru Philippines Poland Portugal Puerto Rico Qatar Romania Rwanda Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Sao Tome and Principe Saudi Arabia Senegal Serbia Sevchelles Sierra Leone Singapore Slovakia Slovenia Solomon Islands



Somalia South Africa South Sudan Spain Sri Lanka Sudan Suriname Sweden Switzerland Syrian Arab Republic Tajikistan United Republic of Tanzania Thailand Togo Tonga Trinidad and Tobago Tunisia Türkive Turkmenistan Uganda Ukraine United Arab Emirates United States of America Uzbekistan Vanuatu Venezuela Vietnam British Virgin Islands U.S. Virgin Islands Yemen Zambia Zimbabwe

FIRST® GLOBAL

FIRST Global is a nonprofit committed to inspiring science and technology leadership, innovation and collaboration in young people from all nations. By making STEM as exciting as any other sport, *FIRST* Global is inspiring the world's two billion youth to pursue STEM fields and be the leaders who work together to solve our planet's most pressing challenges.

WHAT HAPPENS WHEN WE CELEBRATE STEM THE WAY WE CELEBRATE ATHLETICS?



WELCOME TO THE SPORT WHERE EVERY KID CAN GO PRO.

FIRST Global is the world's response to urgent challenges that require a global solution. *FIRST* Global's *Declaration of Interdependence* and *Bill of Responsibilities* represent the foundational credo of *FIRST* Global. We ask all *FIRST* Global students, mentors, volunteers, and supporters to recommit themselves to the values they uphold: <u>first.global/documents</u>

DECLARATION OF INTERDEPENDENCE



We the people of *FIRST* Global – the students, teachers, the mentors, the sponsors, and their supporters – declare that the time has come for the world to recognize our interdependence on one another, and accordingly invite our fellow human beings to join us in working together to improve life on our planet for ourselves and future generations.

FIRST Global believes that all people have special gifts that make them innovators. Planet Earth's problems cannot be solved by one individual or one nation. But when we work together, there is nothing we cannot accomplish – and we can share the benefits of our new inventions with the world.

By sharing and celebrating our common understanding of science and technology, *FIRST* Global is devoted to cooperative pursuit of a more peaceful world by innovating together to ensure the life, liberty, success, advancement, achievement, and happiness of others.

To secure the pursuit of these goals, the people of *FIRST* Global now declare the following guiding principles:

• Throughout history, innovators have allowed us to rise from the ashes of our darkest hours with profoundly transformative innovations, made by individuals and nations with the courage and wisdom to look beyond geographic boundaries and recognize that ideas are strongest when combined.

Continued on next page.

- To overcome the urgent challenges of today and the problems our planet will face tomorrow, we will work to ensure humankind will meet and surpass the incredible accomplishments of past innovators.
- Science and technology can unite all peoples and can, without conflict or division, be used by all nations in a spirit of innovation and cooperation to combat our common enemies of poverty, food scarcity, disease, social and economic inequalities, ignorance, and even war.
- Now, more than ever before, it is essential to promote the opportunity for all young people to master the universal laws of science, technology, engineering, and mathematics, so that as global citizens today and world leaders tomorrow, they will work collectively to ensure an improved standard of well-being in a more sustainable, peaceful world.

Therefore, we proclaim this Declaration of Interdependence, and, with common understanding and appreciation of the urgent need for one another in the quest to improve the human condition today and in the future, formally recognize our dependence on each other – and invite others to join us.

BILL OF RESPONSIBILITIES

In furtherance and support of the Declaration of Interdependence adopted by the people of *FIRST* Global and appealing to our best natures and biggest dreams we enthusiastically and confidently announce that with great power comes great responsibility. All of us have responsibilities: to ourselves, to each other, and to future generations. Accordingly, we mutually pledge to each other



our inspiration, our empathy, and our understanding of the responsibilities set forth:

- 1. We promote peace by working together on science and technology projects. These undertakings foster common understanding and experiences.
- 2. We treat everyone with unqualified kindness and respect. Empathy and hard work are the backbone of progress.
- 3. We recognize the contributions of others. We learn more from each other than we do alone.
- 4. We believe that the world does not need losers to have winners. One person's success does not inevitably lead to another's loss; instead, shared innovations can bring both rewards to innovators and a greater quality of life for all.
- 5. We promote learning and creativity in our communities, our nations, and our world. Imagination and technology are essential tools to build a better future.
- 6. We work to ensure that our own progress does not inhibit others. None of us can succeed at the expense of our fellow citizens.
- 7. We love what we do. We share it with others and, in so doing, will not only drive our innovation, but also bring peace through collaboration.

I, the undersigned, hereby pledge to uphold the values outlined in the *FIRST* Global *Declaration of Interdependence* and its accompanying *Bill of Responsibilities*.

Signature

Date

FIRST GLOBAL CHALLENGE

The *FIRST* Global Challenge is an olympics-style, international robotics competition that takes place in a different country each year. Teams from more than 190 nations receive a standard kit of parts and build and program robots to compete, working together to complete tasks in a game themed around one of our world's greatest challenges.

THE 2023 THEME

As our dependence on energy continues to grow, it becomes increasingly important to innovate the solutions that will ensure a cleaner and more



2023 THEME VIDEO

equitable energy future around the world. While renewable energy comes from natural sources that are continually replenished, including the sun, wind, geothermal heat, and water, Hydrogen-based energy technologies allow for enhanced methods of carrying and storing this energy.

The *Hydrogen Horizons* theme challenges *FIRST* Global teams to reimagine the future of energy by harnessing the power of hydrogen and to combat climate change by creating more sustainable ways to power our planet.



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HYDROGEN HORIZONS IS AN EXCITING OPPORTUNITY TO RETHINK THE FUTURE OF ENERGY IN A WAY THAT DOESN'T HARM OUR PLANET. CLIMATE (HANGE DOESN'T STOP AT **ARBITRARY BOUNDARIES**, SO SAVING OUR GLOBAL ENVIRONMENT DEPENDS ON COOPERATION AMONG COUNTRIES. WE ARE EOUIPPING THESE VOUNG SCIENTISTS AND ENGINEERS WITH THE TOOLS TO COMMUNICATE AND WORK **TOGETHER TO SOLVE THIS** GLOBAL ISSUE.

DEAN KAMEN

FIRST Global Founder

CHALLENGE OVERVIEW

In the Hydrogen Horizons robotics game, two three-team regional alliances work together to produce, store, transport, and convert hydrogen—commonly found bonded to oxygen in water—into other usable forms of energy.

Each alliance produces hydrogen by first extracting water molecules from a central reservoir and using energy to separate them into hydrogen and oxygen atoms. Robots store hydrogen in hydrogen tanks, while both robots and human players store oxygen in oxygen accumulators. Once the hydrogen tanks are filled, robots transport them to align with the oxygen accumulators. The regional alliances then initiate the conversion process by releasing oxygen into the hydrogen tanks, representing either the combination of hydrogen and oxygen in a fuel cell or the combustion of hydrogen, depending on the accuracy of the alignment.

In the last 30 seconds, all six teams form a global alliance to support each other. Teams demonstrate their proficiency in hydrogen technologies by positioning their robots on the hydrogen hub. If five or six robots are fully supported by the metal structure, the global alliance earns a *Coopertition* Bonus.





MATCH SCORING

REGIONAL ALLIANCE COMPONENT

All three teams on a regional alliance earn the following:

HYDROGEN AND OXYGEN POINTS

CONVERSION POINTS

Each oxygen atom inside the hydrogen tank at end of match	1 point	Hydrogen tank not aligned with oxygen accumulator	1.0x multiplier
Each hydrogen atom		Hydrogen tank partially aligned	1.2x multiplier
inside the hydrogen tank at end of match	1 point	Hydrogen tank fully aligned	1.3x multiplier

GLOBAL ALLIANCE COMPONENT

All six teams on the global alliance earn the following:

PROFICIENCY POINTS (CUMULATIVE)

COOPERTITION® BONUS

Five robots fully supported by metal structure	15 points
Six robots fully supported by metal structure	30 points

A team's final score = (hydrogen points + oxygen points) x the conversion multiplier, + the cumulative proficiency points of all six robots + *Coopertition* bonus points



AWARDS

The culminating event of the *FIRST* Global Challenge is the Award and Closing Ceremony on October 10. The following awards, both qualitative and quantitative, will be presented.

ALBERT EINSTEIN AWARD FOR *FIRST* GLOBAL INTERNATIONAL EXCELLENCE

Awarded to the teams whose robots performed the best during the *FIRST* Global Challenge and exemplified all of the tenets of the *FIRST* Global community. This is the most prestigious team award.



FIRST GLOBAL WINNING ALLIANCE

FIRST GLOBAL FINALIST ALLIANCES Runner-up and Second Runner-up.

FIRST GLOBAL GRAND CHALLENGE AWARD

Awarded to teams that accrue the most cumulative points during the competition.

• ZHANG HENG AWARD FOR ENGINEERING DESIGN

Awarded to teams whose robot exhibits excellent engineering and displays elegance and effectiveness during the Challenge.

USTAD AHMAD LAHORI AWARD FOR INNOVATION IN ENGINEERING

Awarded to teams that demonstrate creativity and innovation in building their robot to complete an aspect of the Challenge.

DR. MAE JEMISON AWARD FOR INTERNATIONAL UNITY

Awarded to teams that emulate the best qualities of *FIRST* Global by breaking down barriers, demonstrating *Gracious Professionalism*[®], and building bridges with fellow teams.

RAJAÂ CHERKAOUI EL MOURSLI AWARD FOR COURAGEOUS ACHIEVEMENT

Awarded to teams that exhibit a "can-do" attitude throughout the Challenge, even under difficult circumstances, or when things do not go as planned.

FRANCISCO JOSÉ DE CALDAS AWARD FOR SUSTAINABLE EXCELLENCE

Awarded to individuals who have helped contribute to strong and sustainable *FIRST* Global programs.

KATHERINE JOHNSON AWARD FOR ENGINEERING DOCUMENTATION

Awarded to teams that best demonstrate the journey they took in building their robot.

INTERNATIONAL ENTHUSIASM AWARD

Awarded to teams who support each other and other teams throughout the Challenge.

SOFIA KOVALEVSKAYA AWARD FOR INTERNATIONAL JOURNEY

Awarded to teams that documented and shared their *FIRST* Global experience with the rest of the *FIRST* Global community.

AL-KHWARIZMI AWARD FOR OUTSTANDING SUPPORTER

Awarded to institutions, sponsors, or governments that assisted a *FIRST* Global team.

SAFETY AWARD

Awarded to the teams who exemplify good safety standards in their pits and on the field.

CLARA BARTON AWARD FOR HELPING HANDS

Awarded to teams who help other teams in a time of need.



FUNDRAISING AWARD

Awarded to teams who demonstrated to *FIRST* Global that they made a good-faith effort to fundraise.

OUTSTANDING MENTOR

Awarded to mentors who went above and beyond the call of duty for their team.

JUDGES AWARD – TECHNICAL

During the course of the competition, the judging panel may decide a team's unique efforts, performance, or dynamics merit recognition (optional).

JUDGES AWARD – NON-TECHNICAL

During the course of the competition, the judging panel may decide a team's unique efforts, performance, or dynamics merit recognition (optional).

FIRST GLOBAL INNOVATOR AWARD

Awarded to the top teams for their New Technology Experience projects, which promote a renewable and accessible global energy system.

TEMASEK WOMEN IN STEM AWARD

Awarded to three outstanding *FIRST* Global young women who connect other girls with STEM opportunities.

SKILLS CHALLENGE AWARD

Awarded to the top-scoring teams in the Skills Challenge, which consists of a solo performance by a robot as it plays in the Hydrogen Horizons robotics game.

SOCIAL MEDIA CHALLENGE AWARD

Awarded to teams that participated in a majority of the Social Media Challenges hosted throughout the season.

THE NEW TECHNOLOGY EXPERIENCE

The New Technology Experience is a fundamental component of *FIRST* Global's annual program. It was established as a means for the student community to stay current with cutting-edge technology and provides students with the opportunity to become experts in emerging fields, establish stronger network connections among *FIRST* Global teams, and improve the participants' competitiveness for college, internships, and employment.

The 2023 *FIRST* Global Challenge New Technology Experience — *Energy Evolution* — engaged *FIRST* Global teams beyond the Hydrogen Horizons game. Students learned about all types of renewable energy, selected a topic of importance to their community or nation, and then developed their own innovative solutions to create a clean energy future.

From hydrogen technologies to renewable energy sources, efficiency and electrification to ensuring global access to sustainable energy, 85 teams submitted projects. From them, 10 finalist teams were selected to pitch their projects to a panel of judges in Singapore. The top three teams will receive the *FIRST* Global Innovator Award.

Learn more: first.global/nte





Working at the farthest edge of what's possible

Virtually every leading-edge device has been made using equipment designed and built by Lam Research. We push the boundaries seeking to drive the next semiconductor technology breakthrough that enables our customers' next big idea.

Like *FIRST*[®] Global teams, we believe that when people are empowered to collectively reimagine tomorrow, *we can build a better world for generations to come.*

Let's *prove it.*[™]



Connect with us





OUR SUPPORTERS

TITLE SPONSOR



GOLD





SILVER





Bezos Family

BRONZE





ADVOCATE



INDEX OF TEAMS (A-Z)

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ACCESS THE 2023 PARTICIPATION MAP TO LEARN MORE ABOUT EACH TEAM AND EVEN SEND THEM YOUR SUPPORT!

VIEW MAP >



The *FIRST* Global logo below a team's profile indicates they received financial aid from *FIRST* Global.



TEAM AFGHANISTAN



Team Afghanistan couldn't be more proud to represent their country in Singapore. Due to the political situation in our country, our team currently resides in Toronto, Canada where we had to move with our families in 2021. Our team members are chosen amongst the most talented Afghan girls here in Toronto and represent almost all ethnicities inside Afghanistan. As a dedicated group of motivated students, mentors, and volunteers, we aim to transform the culture of our community and grow into some of the world's young leaders in science and technology. We are here to prove that being a group of girls from Afghanistan does not and will not stop us from loving STEAM.





TEAM ALBANIA

FGC Team Albania is a group of eleven young engineers aged 14-18, who have all been involved in various FIRST programs or robotics competitions before. The students are all truly passionate about robotics and have attended various international robotics and programming competitions, including Technovation, FTC, FLL, and previous FGC editions. Team Albania's main goal is to foster the development of STEM within the Albanian youth community, in order to help Tirana become an important innovation center in Eastern Europe.









TEAM ALGERIA





Team Algeria is a group of talented students who were selected based on a comprehensive evaluation, focusing not only on our technical proficiency but also on the application of essential soft skills. For us, the *FIRST* Global Challenge is a profound learning experience and a formidable test of our capabilities. Our ultimate goal is to present a compelling image of our country, our youth, and their immense potential to individuals and nations we encounter, both virtually and in person.





ΤΕΔΜ ΔΝ

FIRST Global Team American Samoa is an all-girls team with previous experience in robotics programs. This year is the first time American Samoa is being represented at the *FIRST* Global Challenge and we are proud to be a part of this historic event.







We are the Angolan FIRST Global team, passionate and hardworking Angolan Robotics team, composed of young students, representing a group of 400 students, after we clinched the title at the prestigious 2022 National Robotics Championship. Blending innovation, creativity, and dedication, we are committed to pushing the boundaries of robotic technology to shape the future, in Angola. Together, we not only build robots but also bridge the gap between ideas and actions, turning dreams into reality. We are determined to continue learning, growing, and inspiring others to embrace the exciting world of robotics.



Team Antigua and Barbuda (DadliBots) here - we met each other at the TechByte Summer Camp 2023 which was an awesome STEM and business themed boot camp that enlightened us on the many possibilities of engineering through robotics. We had so much fun collaborating with our peers, as we brainstormed solutions that could help us achieve the 2030 Sustainable Development Goals (SDGs) by addressing four major global challenges like our home Antigua (Ann-tee-ga) and Barbuda (Bar-bue-daa) - "Where the Beach Is Just the Beginning."





FIRST GL@BAL

TEAM ARMENIA

TEAM ARGENTINA



Our team is composed of five exceptional students from the Tomas Alva Edison School in the province of Mendoza, Argentina: Sebastián Martínez Santos. Gerónimo Herrera. Nicolás Expósito, Sara Lamagrande, and Ignacio Moreno. Each of us brings a different set of skills, forming a harmonious collaboration that fuels our effort to build a robot prepared for the challenge. Because beyond being a team, we are a family united by our passion for robotics, science, and innovation. In the face of global challenges, unity is paramount. We firmly believe in dismantling the barriers that divide us and in sharing the wealth of our culture with open arms.





We are Team Armenia from United World College Dilijan (UWCD), an international school that brought together our passionate teammates. Team Armenia 2023 is a testament to the strength of collaboration across borders. We believe that by combining our diverse talents, experiences, and cultures, we can overcome challenges and create meaningful change. As we embark on this exciting journey, we are motivated by the theme of this year's challenge. The opportunity to explore the potential of hydrogen as a clean and abundant energy source drives us to push the boundaries of innovation. We aspire to merge our expertise and skills to propel the development of sustainable hydrogen-based technologies.






This is the first-ever Team Aruba participating in the FIRST Global Challenge! Composed of four students aged 16-18, this is the first robotics experience for some members of the team. The team met at a "Find your STEM" summer camp, organized by a local organization called The STEM Embassy. Having learned about sustainable energy technologies in their classes. Team Aruba is excited to attend the FIRST Global Challenge and learn the skills they need to make Hydrogen Horizons a reality and do their part in mitigating global warming.





TEAM AUSTRALIA



Team Australia consists of students from Sydney, NSW. Our team members come from the Barker Redbacks FRC team 4613, having also had experience in FLL and FTC programs. The students also participate in numerous initiatives within the community, including mentoring younger students and establishing new robotics teams. We are excited to utilize our skills and learn new ones from people all over the world, understanding how there are so many ways to approach one problem. It's our team's honor and privilege to participate in FGC 2023 and we are so excited to learn about others from around the world.

TEAM AUSTRIA



Team Austria is made up of five students from the HTBluVA Villach school in Villach. Austria. At school, the team's students are involved in a variety of academic and after-school activities. including programming, marketing, swimming, cycling, chess, and theater. In recent years Austria has done a lot of research to find more use for sustainable practices. We are proud to represent our diverse country and show our commitment to the protection of our environment. We want to help preserve our culture and environment for many generations to follow.





TEAM AZERBAIJAN

FIRST Global Team Azerbaijan is made up of aspiring innovators, scientists, engineers, and mathematicians who represent the future of Azerbaijan's technological landscape. The team is committed to equipping the next generation with the skills and knowledge needed to tackle global challenges.







Team Bahamas is composed of high school students from Saint Augustine's College in Nassau, The Bahamas. The students on this team are members of the school's Robotics and Computer Science Club, a club dedicated to supporting and fostering students' interest in and knowledge of coding, technology, and robotics. Our team is excited to represent The Bahamas on a global level in the STEM field. Through this year's FIRST Global Challenge, we hope to bring more awareness to the idea of a sustainable energy future in our nation.





TEAM BANGLADESH

This year, Team Bangladesh consists of 18 highly skilled students including our alumni, all shining in the realm of STEM. In our nation, the reach of robotics and technological STEM remains limited. Even amidst challenges like scarce resources, our dedication remains unwavering. We persistently augment our STEM expertise while generously spreading the knowledge to others. Bangladesh's vulnerability to climate change, including rising sea levels and extreme weather events, underscores the urgency of sustainable energy solutions. We hope this event will promote equitable energy access, empower marginalized communities, and foster inclusive development.

TEAM BARBADOS



Team Barbados is proud to represent our country on the world stage. Our team's students bring an array of skills to their work, combining programming, engineering, and artistic knowhow to design their robot. Above all else, we are excited to make new friends from new cultures, sharpen our skills as roboticists, and shine a spotlight on their home of Barbados.





Greetings from Belarus! We are a team of students and mentors willing to participate in *FIRST* Global Challenge in cooperation with other teams from all over the globe in Singapore this year. Our passion for robotics and STEM brought us together, and we would like to apply our knowledge and skills in these fields to make the world a better place for everyone.



TEAM BELARUS

TEAM BENIN

TEAM BELIZE



(...)

Eighteen exceptional students of various ages and grades make up Team Belize for the FIRST Global season. Our team is committed to striving for top-tier performance through collaborative efforts. We prioritize active communication with other teams, fostering connections, and building friendships with participants from diverse cultures and backgrounds. Our goal is to motivate more STEM learners to participate in resolving urgent issues. By combining our love for robotics with a sense of purpose and social responsibility, we aim to positively impact the world and contribute to solutions for global challenges.



Benin, our beautiful home, is a West African country on the road to development, through the management of its resources, the practice of mutual aid, and the promotion of its cultural wealth and traditional values. Our team is made up of studious young learners, aged 15-18, with a passion for science, mathematics and technology, and who enjoy reading, music, games and sport. Under the guidance of a group of passionate, caring and friendly mentors and coaches, we are convinced that determination. team spirit, and a little experience will see us emerge victorious from the 2023 FIRST Global Challenge, all while gaining a wealth of new knowledge.



TEAM BERMUDA



We are Team Bermuda, a group of dedicated young people ready to represent our country. As a whole, the FIRST Global Challenge is a stimulating test of our abilities and a life-changing learning opportunity for us. Also, it gives us a chance to develop our skills and experience through a variety of group exercises that encourage respectful feedback, analytical thinking, and efficient teamwork. Our main objective is to convey to all we meet, a captivating image of our nation, our individuality, and our enormous potential.



TEAM BHUTAN



Team Bhutan consists of a group of five top-performing students from across the country, mentored by two hard-working teachers. As a carbon-negative nation with a constitutional requirement to keep 60% of our land covered in forests. we believe events like FIRST Global encourage the collaboration and development of green technology we need to solve this world-wide problem. We are eager to learn from and impart our experience to teams from other countries, with the aim of motivating others to take action on climate change.





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TEAM BOLIVIA



Team Bolivia is made up of three female students and two male students from different corners of Bolivia. They were the winners of the largest free national robotics competition in the country's history, where more than 3,000 Bolivian youth came together to form the largest STEM community in Bolivia. Through the competition, the opportunities to be part of the largest robotics event in the world, the 2023 FIRST Global Challenge, have been democratized! Our national team represents the multiculturalism of Bolivia and the hope of all our youth to be able to solve problems in our context through technology, science, programming and robotics.







Team Bosnia and Herzegovina is composed of six students located in Mostar, a city known for connecting and preserving various cultures, historical periods, and valuable monuments. We are all very grateful for this opportunity and excited about the upcoming challenges, gaining new knowledge, meeting other participants, as well as enjoying the journey.





C∗TİKA

TEAM BOTSWANA



Team Botswana is made up of boys and girls who are highly motivated to innovate solutions that would solve most of the world's challenges. Our team members originate from different demographics of the country by location. Gracious professionalism is what guides and drives us. Together with the youth of the world, we believe that if given an opportunity to show our capabilities, the challenges facing our planet today will be issues of the past.







TEAM BRAZIL



Team Brazil consists of 15 members from 2 different states across the country. Together, we blend into an intense diversity mix, representing 3 distinct FIRST teams - from FLL to FRC. We have a passion for building new ideas and concepts from scratch, as well as making our work environment warm and friendly-iust like Brazilian people! For this year's theme, Hydrogen Horizons, Brazil will stand out for our problem solving skills. After all, we are the 10th biggest green hydrogen producer in the world!



TEAM BULGARIA



TEAM BRUNEI DARUSSALAM



Team Brunei Darussalam is a group of students who recently participated in and won the National Robotic Coding Conquest 2023, organized by Universiti Teknologi Brunei. Our fervent mission is to pioneer innovative solutions that not only bolster performance but also contribute significantly to crafting a cleaner, greener world. Our ultimate dream envisions a Brunei Darussalam of tomorrow where cutting-edge robotics play a pivotal role in actively curbing carbon footprints, optimizing resource allocation, and propelling the realization of renewable energy as a ubiquitous reality.





Hello from Team Bulgaria! Our team consists of two mentors and four boys, we are Alexander, Siemon, Victor and Mario. Outside of robotics, our hobbies include kickboxing, playing video games, watching movies, and hanging out with our friends. Working on the robot for this year's *FIRST* Global Challenge has brought us closer together as a team and as friends.







Greetings from the Burkina Faso team, This year's Burkina Faso team is made up of five members, including two girls and three boys. For this year's FIRST Global competition, our team was selected on the basis of school results from previous participants in last year's global competition, to ensure a team still passionate and experienced for the 2023 FIRST Global Challenge in Singapore on the theme of Hydrogen Horizons. The Burkina team hopes that this opportunity will enable them to learn more, discover new cultures and, above all, share their expertise.





TEAM BURUND

We are a team of five girls wholeheartedly engaged in STEM education. Despite the stereotypes that picture a woman as a less capable person, we strongly believe that we can emerge to take up the challenges and become the drivers of change for the community. The FIRST Global program is sharpening our sense of teamwork and cooperation. We are so lucky to be part of the generation that receives this kind of training that goes beyond boundaries and stimulates imagination and creativity towards the creation of impactful solutions that our world desperately needs.



TEAM CABO VERDE



Team Cabo Verde, hailing from the picturesque city of Mindelo on the island of São Vicente, is a group of eight students from different schools who have united through a shared passion for robotics and the desire to contribute to our country's development through technology. Our team represents a beautiful tapestry of diversity, with five boys and three girls, aged 12 to 17, each bringing their unique talents and perspectives to the table. Some might be programming and robot assembling, others might be the passion for hydrogen and agriculture and others might be simply the love for trying new things.



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TEAM CAMBODIA



Consisting of 7 mindful youths from different corners of the country, we of Team Cambodia share a passion, inspiration, enthusiasm, and curiosity toward using technology to make a better world. By being part of this competition, we hope to make new experiences and take the opportunity to apply what we have learned, engage with the world, and collaborate with other like-minded individuals for innovative solutions to global problems.



TEAM CAMEROON



We are Team Cameroon, the brilliant minds representing the country dubbed Africa in miniature! Despite the diversity of our country and team, a common point of national focus is excellence. That is why we. Team Cameroon, have as a mission to showcase this excellence during this competition. through our grit and creativity in the world of technology. We understand the huge sacrifices made for us to be here today, and we are excited to showcase our talents and make each and every one proud.





TEAM CANADA

Team Canada is a community team from FIRST® Robotics. This means that we are supported by our local science center, TELUS World of Science - Edmonton. and accept any student to join our team, regardless of their skill level or background. Because we don't work out of a school, but rather a public space, we're able to interact with people who visit the science center and spread the word about FIRST. Fueled by curiosity and a relentless pursuit of excellence, we hope to embody the true spirit of teamwork and gracious professionalism.









Team Cavman Islands is composed of six high school students and FTC competitors from six different Cayman Islands high schools. Following our participation in the 2018 FIRST Global Challenge, the Cayman Islands began a FIRST Tech interschool program that included all Cavman Islands high schools. Our national team has representation from each of our high schools - uniting us as one team. As a small island that is dependent primarily on fossil fuels, we understand the importance of revolutionizing innovative renewable energy technologies such as hydrogen to ensure a cleaner and more equitable energy future for all.





Team Central African Republic comprises several talented students who share a variety of interests, as well as having overcome the hardship of our unstable environment due to armed conflicts. We are a high school robotics team based in Bangui, Central African Republic. Despite each team member coming from a different background, we make it our goal to always continue learning new things. From the heart of Africa, we are so thrilled to connect with other nations as we join this year's 2023 FGC competition in Singapore!





TEAM CHAD





Team Chad is made up of young people from diverse backgrounds and without social distinction, to show the world the beauty of our diversity and the strength of our differences. The participation of young Chadian talents in the *FIRST* Global Challenge is a source of pride for the country. It testifies to the capacity of young Chadians to innovate and to contribute positively to the scientific and technological development of the country.





Team Chile is an all-girls robotics team with students from different high schools around Santiago. We couldn't be more excited to be a part of this competition. Our team hopes to develop our STEM-related skills, make new friends, and transmit our passion to awaken the curiosity of those who see us.





TEAM PEOPLE'S REPUBLIC OF CHINA



Team People's Republic of China is a group of passionate and dedicated students from a number of high schools. Our team members boast a great diversity of skills but maintain a shared love of STEM and robotics. We embrace the idea of cooperation and communication to foster mutual understanding. We believe that great achievements don't result from the effort of one individual but from collaboration. Ultimately, our team hopes to reflect the FIRST Global spirit in all we do and utilize our experience and knowledge to make a positive impact on the world.





Team Colombia is the result of a program that brings together several schools and seeks to inspire children to join STEAM clubs and become passionate about science and technology. Once the club's participants are old enough, they can apply for a place on the team that represents our country in this wonderful event. All together, we are represented by nine inspiring students who wish to make an impact on the world.



CONCEPTOS

TEAM COMOROS



Team Comoros is proud to say that we are an all-girls team this year, including our mentors. We engage in a lot of community outreach, fundraising activities, and coaching students from other associations to get them interested in STEM at an early age. Team Comoros is aware of the privilege they have over every other student in the country as far as STEM is concerned. We are therefore committed to giving back to our communities by introducing robotics and STEM to other NGOs working at the grassroots level, including the National Scouts, students associations, and CBOs.



TEAM CONGO

The Congo Team regroups young teenagers who everyday show their interest in STEM. Their extraordinary vision of the future of the world confirms how they want to impact by finding sustainable solutions to each major issue that their community faces. The whole team is very delighted to attend the 2023 FGC Singapore, which is definitely a great opportunity to meet, challenge, and interact with other young and talented people from around the world.





TEAM DEMOCRATIC REPUBLIC OF THE CONGO



Team DRC, composed of a group of talented young boys and girls from the Eastern region of the country (Bukavu) has a mission: to engage in learning, work diligently, enjoy themselves, and continue to blaze a trail in STEM within their community. Above all, the team aims to deepen their understanding of the significance of looking into green hydrogen power and the manifold positive effects it will bestow upon our planet. This year's FIRST Global Challenge represents a chance for the youth to become a valuable resource in grasping the hydrogen potential within our nation and the benefits it offers.







Team Cook Islands is composed of five students who live on the main island of Rarotonga, which has a population of 11,000 people. This year's Hydrogen Horizons Renewable Energy theme is important to us because our country is directly affected by the negative impacts of climate change. Our aim is to represent our country with pride, inspire future generations, and demonstrate that technology can drive positive change and have global impacts regardless of our size.





TEAM COSTA RICA



This year, all the members of Team Cosa Rica belong to Mayor Thomas Benjamin Lynch Limon's Public Library, as well as the AC Makerspace Robotics Club. All of our students attend public high schools and are enthusiastic about learning and sharing STEAM skills.



TEAM CÔTE D'IVOIRE



Team Côte d'Ivoire, also known as IVOIROBOTICS, is a passionate and determined group of 16 members, including 8 girls and 8 boys. We are proud to represent our country and highlight its different regions, such as handball, bogoué and the autonomous districts of Abidian. We are driven by an unfailing determination to bring honor to our country and to represent the Ivorian youth with excellence during this international competition. Together, we are taking up this challenge with enthusiasm and ambition, aware that we are helping to shape a brighter future for our planet through innovation and technology.



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TEAM CROATIA



Team Croatia is a group of roboticists made up of the best members from the Zvane Roboticz team at Zvane Črnje Rovinj High School, as well as the top individuals from the Robonada robotics team. We are excited to bring our knowledge, creativity, and determination to the 2023 FIRST Global Challenge in Singapore. With the opportunity to compete against some of the brightest minds from around the world. we are ready to showcase our innovative solutions, teamwork. and adaptability. We aim to push the boundaries of robotics, promote cross-cultural exchange, and inspire the next generation of aspiring engineers and scientists.



Team Cuba is composed of teenagers from different schools in the province of Matanzas, Cuba. We were brought together by a member of Canada's Team Kinetic Knights, Megan Quade, who introduced us to this wonderful and exciting world of robotics. We have gone out into the community and shared our experiences with younger students, showing them what STEM can do to change the world and awaking their love for science and technology through demonstrations.





Singapore



TEAM CYPRUS



Team Cyprus has a long history with *FIRST* competitions, as we have been participating in *FIRST* Global and other *FIRST* competitions since 2017. As a team we believe that the most important thing we can do is to spread the ideals of *FIRST* and inspire other bright young minds to pursue robotics and STEAM, which is a thing we have done continually in the past through several initiatives.



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TEAM CZECHIA

FIRST Global Team Czechia represents a rich tradition of academic excellence in the heart of Europe. Czechia's commitment to nurturing the next generation of STEM leaders is evident in their track record at international robotics competitions. With a strong emphasis on creativity, problem-solving, and collaboration, these talented individuals are not just competing but also shaping the future of technology.





TEAM DENMARK



Team Denmark is represented by a high school robotics team from Aalborg Tekniske Gymnasium, based in Aalborg in the northern part of Denmark. All team members have experience with robotics and programming. Earlier this year, our team won the Danish national competition "Robotolympiaden" at Aarhus University, which qualified us to compete in Singapore.



Team Djibouti isn't just a team: we're a convergence of aspirations, dreams, and determination. With diverse backgrounds and a hunger for excellence, we embrace challenges with open arms, knowing that each obstacle we conquer propels us closer to our dreams. Our team motto, "Innovate. Inspire. Impact.," embodies our ethos as we work tirelessly to leave a lasting mark on the world through innovation and teamwork.



TEAM DOMINICA



United by their love for robotics. Team Dominica comprises talented, intelligent, and motivated students from 7 Dominican schools. The students all come from different STEM-related backgrounds exhibiting varying degrees of technical prowess, problem-solving & coding skills, and collaborative abilities. Our team is dedicated to education and outreach. We believe that every young person who we can get interested in STEM is another innovator, another engineer, another problem-solver, another changemaker.





ΤΕΔΜ DOMI

Amidst the vibrant landscapes of the Dominican Republic, a team of seven fervent individuals is poised to grace the spotlight at FIRST Global. This team, consisting of five exceptional students - Andy, Aryelis, Axell, Dairy, and Francelli guided by mentors Isaac Vasquez and Jose Enrique, is resolutely devoted to shaping a sustainable future through the realm of science and technology. As we project the name of our beloved country onto the expansive STEM stage, we transcend the role of mere competitors; we are the very ambassadors of change and we stand at the forefront of the hydrogen energy and sustainable technology sector.





TEAM ECUADOR



We are Team Ecuador, and we're proud to be part of a Robotics and STEAM Clubs Project to get involved in programs with several schools, and thanks to *FIRST* Global we want to make it possible. Our aim is to join many young people to form the National Team for several contests inside of the country and abroad. The team is composed by Mentors Santiago, Christian, Alex, Joel and Joel, students are Romina, Joel, Edson, Jorge, Ariel, Kenneth, Anthony and Carlos.



Team Egypt consists of 5 industrious high school students, aged 16 to 17, from Alexandria, Egypt. Though some of us prefer programming while others prefer design, our whole team works together on the design and programming of the robot so that we can learn from each others' experiences. We believe that using hydrogen as a source of energy is actually very efficient, and that if it is produced in a climate-friendly way, it can help us turn our backs on fossil fuels once and for all.





TEAM EL SALVADOR



Team El Salvador is made up of a group of talented high school students from various parts of the country. We stay active throughout the academic year, delivering STEM workshops and presentations, participating in camps to fulfill the Sustainable Development Goals, and establishing contact with local leaders to promote STEM education. Our goal for this season is to build a united team in the spirit of FIRST Global, expand our knowledge of engineering and robotics, secure the future of the team, and continue to inspire as many kids as possible to get involved in science, robotics, programming and engineering.



TEAM EOUA'

Team Equatorial Guinea is excited to attend the 2023 FIRST Global Challenge. Our program has helped students to show more interest in science and technology. For example, one of the students now has a keen interest in science and technology and aspires to be a Petroleum Engineer. Another student, who now has an interest in STEM, aspires to be an IT professional. Likewise, we have another student who now sees science and technology has a path to a new world, and is aspiring to be a Mechanical Engineer.







TEAM ERITREA



Team Eritrea is beyond excited to represent our nation Eritrea and expand our robotic knowledge as we travel to Singapore to compete! Team Eritrea is formed of five students and two mentors. We are looking forward to working in national alliances and learning more about Hydrogen Horizons.







Team Estonia takes major pride in representing our country. This year, we warmly welcomed new members while bidding farewell to a few of our longstanding members who have transitioned into mentorship roles, providing guidance and support to both our seasoned and fresh team members. Despite studying in various places across Estonia, with distances spanning up to 200 km. our love for robotics unites us. By representing Estonia in the FIRST Global Challenge, we aim to showcase the innovative spirit and technological expertise that our country embodies.





TEAM ESWATINI



Team Eswatini is an energetic and self-driven team, a powerhouse of 24 innovative high school girls and boys doing grades 8 to 12. We come from diverse backgrounds, we represent seven (7) different Tinkhundla (constituencies), and all 4 administrative regions of the Kingdom of Eswatini. Our team members emanate from 14 different rural and urban, public, and private schools. We aim to use this experience to learn and advocate for change in energy policies in Eswatini. We will lobby for acceleration in switching to renewable energy using the New Technology Experience: Energy **Evolution Project.**





TEAM ETHIOPIA

The Ethiopian team for the 2023 *FIRST* Global Challenge is made up of students and mentors who all share a passion for robotics. We are very excited to represent our country this year at the *FIRST* Global Challenge. Our team consists of students from different schools.







TEAM FIJI



Coming from a small group of islands in the South Pacific, Team Fiji (aka the BulaBots) is incredibly esteemed to have the privilege of representing our noble banner blue. Our team believes that solutions to our greatest problems lie in integration of traditional knowledge and innovative technology, along with the support of the global community. We believe that no one is in this fight alone. With this year's theme, Hydrogen Horizons, Team BulaBots would like to take this opportunity to learn about this untapped energy source from other countries and, upon returning, implement what we've learned in our communities.



We are a team composed of 5 students coming from Otaniemi Upper Secondary School. Our team is mentored by a 2017 FIRST Global gold medalist, Simo Naatula, and by Niklas Halonen, a second-year graduate engineering student. Our team consists of Timofey Lobanov, Urho Markkanen, Kaisu Parviainen, Otto Kuusisto, and of course Petri Liukko. We are also being assisted by Matti Heikkinen, a physics and mathematics teacher at Otaniemi Upper Secondary School. We are all driven together by a passion for robotics and technology.



TEAM GABON

TEAM FRANCE



France, renowned for groundbreaking inventions and pioneering discoveries, has long been a global leader in science and technology. This team, composed of bright and enthusiastic young talents, carries forward this legacy into the realm of robotics and engineering. Their participation in *FIRST* Global exemplifies France's dedication to creating opportunities for young minds to excel in STEM fields.





Team Gabon is composed of students from various schools and universities in Libreville, the capital of the country. This year the team took part in the National Student Fair organized by the Ministry of Higher Education. We presented our robot and at the end of this fair, several students came to register for our club, so we are always growing! We hope to make friends with the other teams and represent our country with dignity and pride.



TEAM GAMBIA



Team Gambia consists of 16 students from 7 different schools in The Gambia. The commonality shared amongst the students is their love for technology and STEM in general. The students are once again brought together by Gambia Participates (GP), an organization that harnesses the power of technology to empower citizens and address pressing governance issues. We bring with us a deep well of talent and are determined to leave FGC 2023 with a record that Team Gambia has not achieved since 2017.





TEAM GEORGIA



My name is Konstantine Davitashvilil and I have always been fascinated and interested in robotics. My name is Irakli Mchedlishvilli and I always wanted to participate in an international tournament like this. I am Nino Macharashvili and I am interested in STEAM, especially robotics, engineering, and artificial intelligence. My name is Ilia and I am very excited as this will be my first time participating in the FIRST Global Challenge. I am Nikoloz Lobzhanidze and being in Team Georgia gives me a tremendous opportunity to get to know new people who are like-minded and for me to face new challenges and put myself to the test.



TEAM GERMANY



Team Germany consists of five members, of which three are talented rookie students, and two are girls with previous experience in the *FIRST* Global Challenge. We firmly believe in the power of education to inspire and empower individuals, both within the *FIRST* community and beyond. Our team strives to impart our knowledge and expertise to others, particularly other Global Teams, children and non-*FIRST* participants, to ignite their curiosity and passion for robotics.



TEAM GHANA

Team Ghana comes to *FIRST* Global from the Achimota School in the heart of Accra, Ghana. As a team, we're a bunch of enthusiastic students amped up about robotics, creativity, and embarking on thrilling adventures. Armed with ambition, a pinch of teamwork, and a sprinkle of excellence, we're diving into the Hydrogen Horizons challenge, all ready to make some waves.







Team Great Britain is represented by a group of devoted young innovators who have been immersed in the world of robotics for over two years each. We have participated in both FTC and FRC competitions representing team 1884, honing our skills in engineering, programming, and problem-solving under the guidance of dedicated mentors. For Team Great Britain, this competition is not only about pushing the boundaries of innovation but also leaving an enduring mark as ambassadors of positive change in the world of robotics and beyond.



TEAM GREECE



Team Greece consists of 58 high school students from all across the country. Our team has evolved through the years: new members are added each year and are familiarized with REV Robotics. CAD and Coding by the past members that now have the role of Supporting Mentors. In our work, we have reached over 4,000 children of all ages and participated in over 200 events! Our goal is to build a team with the spirit of FIRST Global, expand our knowledge, secure our future, inspire as many children as possible and offer everyone opportunities for learning and self-development!





TEAM GRENADA

Team Grenada is a dynamic and spirited group of students driven by a collective passion for innovation and sustainability. As participants in the FIRST Global robotics Challenge, we stand at the forefront of pioneering solutions for the "Hydrogen Horizons". With a resolute commitment to equality. environmental protection, and inclusivity, we unite to address pressing global challenges and advocate for a brighter, cleaner future. Together, let us forge a path towards a brighter, cleaner, and more equitable future for all.



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TEAM GUAM

Team Guam is composed of 7 students from 3 different schools on the island. Our students all have experience with robotics, though we share many other interests too. Some of our team members are involved with cross country, the math olympiad, JROTC, the chess club, and more. We aspire to enrich my understanding of technological solutions to global problems and establish connections with peers from around the world.







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TEAM GUINEA

TEAM GUATEMALA



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Team Guatemala consists of 5 passionate and curious teenagers, from all around the country, aged 16 to 18 years old. Although our country might be small geographically, we all have a giant heart! What can you expect from Team Guatemala? Totally kindness, ambition and empathy! We want to make a better world, create bonds, and inspire future generations. Will you join us?





Team Guinea is brought to you by STEM Guinea, a nonprofit platform that promotes STEM, robotics, and innovative education in Guinea. Our team is helped by ex-FIRST Global students serving as technical mentors, as well as students are from public schools, government assisted and private schools throughout our region, STEM training centers, partner schools and other disadvantaged learners' platforms. The team is happy to be able to get to know new cultures as well as learn from other teams and be able to compete.



TEAM GUINEA-BISSAU



Team Guinea-Bissau is composed of seven members: five students from the Polytechnic SOS school and our two gracious mentors. Some of our students have attended FIRST Global in the past. We look forward to meeting our peers from all over the world, exchanging ideas, solving problems, learning, and cooperating.







Team Guyana is a cohort of tech-savvy teenagers who are igniting the passion for innovation in the next generation of STEM enthusiasts. We share our passion through endeavors such as outreach programs, educational camps, and other fun activities organized by STEMGuyana. We're not just building robots; we're building a better future.



TEAM HAITI

Team Haiti is made of students from three different schools in Jacmel. We were introduced to robotics in 2021, and went on to be the national FLL team champion in 2022. However, this is the first time we are going to participate in *FIRST* Global, and with the Hydrogen Horizons Challenge we seek to grow our knowledge on sustainable sources of energy and promote the beneficial impact it will have to our environment, our community, and the whole world.



TEAM HONDURAS



Team Honduras is made up of members from three different schools in Tegucigalpa, and we are very excited to start this learning chapter in our high school journey. Even though our schools have participated in robotics competitions before, this is the first experience for all of us! With the Hydrogen Horizons challenge, we hope to explore clean and sustainable energy sources that will contribute to the environment and the health of our community and planet.



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Team Hong Kong, China comprises 5 students from different schools in Hong Kong who are thrilled to participate in the 2023 *FIRST* Global Challenge. Our passion for robotics stems from the exhilaration of problem solving and our deep fascination with this highly interdisciplinary field. We also find a great sense of fulfillment on this journey of exploration. With every member having different backgrounds, we hope to utilize individual strengths to build a stronger team. GLOBAL

TEAM HOPE



Team Hope is represented by students who escaped a dangerous civil war and have settled into a new home in Lebanon. Over the years, we have enrolled in various training courses which prepared us to win more than 20 awards on the national level and one award on the regional level. in addition to 7 awards on the international level. Ultimately, we hope to reform the perception of refugees as dependent individuals to independent and capable ambassadors of hope, as willing change-makers who are thriving and strive to rebuild their country again.


TEAM HUNGARY



Team Hungary's students were selected by a rigorous selection process in which applicants had to accomplish tasks in the field of their desired position on the team. Applying designers built a robot for a specific function, the programmers tried to make it move, the drivers had a race. and the spokespeople were asked to create a media strategy and present their ideas. As a group, we are enthusiastic students with well-experienced mentors who are waiting for the moment to show the world our progress, the result of our hard work, our robot.



TEAM INDIA

Team India is a group of 5 students, four boys and one girl, who are elated to represent their country. We belong to Team Legogoa, a parent-led community club that has been pursuing robotics for the past 6 years and has won multiple National and International awards. We were chosen after a difficult selection process, competing against experienced and veteran teams from across the country. Our team belongs to a small state that lacks facilities such as robotics labs, coaching centers, and veteran teams. We hope that our participation will make us the torchbearer for smaller regions pursuing competitive robotics.





TEAM INDONESIA



Team Indonesia is made up of youths with ambitious goals to bring our beloved FIRST® Robotics activities to our homeland, and become science and technology leaders by the golden year 2045, the centenary of Indonesian Independence. Our team consists of 30+ students from all across the nation. We are always spreading awareness about STEM education to our nation's youth through outreach from robotic workshops, seminars, and showing our works in public events. With our slogan "Bring FIRST® To Indonesia" we show our accomplishments in science and technology to the public.





Team Iran is proud to showcase their rich history and culture. 30 students from different cities and backgrounds have come together to join the team and collaborate on innovative solutions to help the environment and their country. Despite our differences, we share a common goal of making a positive impact on the world around us. Through our efforts, we hope to contribute to a better future for both Iran and the planet.





TEAM IRAQ

Team Iraq consists of students from different schools in Basra City. Most of our team are experienced in international exchange programs, and have cultivated international friendships while being active in peacebuilding initiatives. We hope to experience new and exciting people, learn more about other countries' languages, cultures, and food, and correct the stereotype of Iraq, which is mainly related to the misleading media of war and conflict.





TEAM IRELAND

Team Ireland consists of 8 students and 3 mentors, with two of our mentors being former *FIRST* Global participants. Our team members are 16-18 years of age and all attend the secondary school Confey Community College in County Kildare. With unwavering optimism and a passion for collaboration, we strive to harness the power of technology and teamwork to create a brighter future, not just for Ireland, but for the world.



TEAM ISRAEL





Team Israel comprises 10 students from Cramim Atid Binyamina high school who also serve on the FTC Team Orbit Vikings 14029. Our team is dedicated to showcasing the technological prowess, creativity, and determination that define our nation's spirit. Through our participation in the *FIRST* Global Challenge, we aim to not only demonstrate our technical skills but also build connections that transcend geographical boundaries and make a positive impact in the world.

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Team Italy is composed of students of various ages that study a variety of STEM disciplines including computer technology, electronics, telecommunications, and automations, among others. We are more than just a team: we are friends. We help each other grow and learn things that we didn't know before, because we recognize that each of us has different abilities and something to contribute. By combining all of our qualities, abilities, and competencies, we believe we can achieve excellent results that inspire other students like us.

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TEAM JAPAN





Team Jamaica brings a "Melting Pot" of cultures, backgrounds, and skills to the table. Coming from 5 parishes and 21 high schools. Each of us brings our own unique qualities in service of our team's ultimate goal: to dominate this year's competition in as many categories as possible, place our country on the map of STEM development, and take any newly-developed expertise back to our respective communities. We, as a team, believe that the implementation of sustainable initiatives, especially those that integrate our natural resources, is necessary in guaranteeing the long-term growth of our nation.



Team Japan is composed of students at Ryugasaki Daiichi High School, a public high school in a suburb of Tokyo, and we are thrilled to represent Japan at the 2023 FIRST Global Challenge. As representatives of Japan, a country at the cutting edge of technology, we are committed to play an important role in FGC with our unique robotics skills and distinguished ideas. On this journey, we will foster diversity and trust through working closely together with young peers from all over the world.







Team Jordan is represented by the RoboRazors robotics team, which was established by students from AI-Hassasd Tarwabi schools in 2017. All of us, no matter what our roles are, help each other in the toughest situations no matter the difficulty, which is what makes us strong. We have all promised to make the spirit of the Legends of RoboRazors Proud by trying to win at FGC 2023, and that is what unites us all together.



TEAM KAZAKHSTAN

We are focused on introducing robotics and engineering skills among young people. Our goal is to inspire the next generation of leaders and innovators who will change the world! Team Kazakhstan was selected from the Central Asian Championship, which included 40 different teams from around Kazakhstan.



TEAM KENYA



Team Kenya is a group of young guns brimming with enthusiasm for all things STEM, robotics, and saving the planet. Our team members have no background in robotics or *FIRST* competitions, but we're excited to participate! With our mentors—rockstar FGC alumni who are spreading STEM love all over Kenya—by our side, we're turning FGC skills into sparks that ignite a STEM fever across our nation.







TEAM KIRIBATI



Team Kiribati consists of five talented students who love coming up with new ideas and solving problems. We come from two different schools - two boys are from Moroni High School, and three girls are from King George V and Elaine Bernacchi School. Our goal is to do well in the FIRST Global Challenge by showing off our creative ideas and problem-solving skills. We're determined to face the challenges ahead with a positive and cooperative attitude. We're proud to represent our beloved country, Kiribati, and we can't wait to make our country proud as we take part in this wonderful competition.









We are Team Republic of Korea, a team united with the ultimate goal to help Korea, and further on, the world, in a time of need. We have always been concerned with the many hardships the world is facing, and we believe the *FIRST* Global Challenge is our chance to do our part.



Team Kosovo is an energetic and motivated group of seven high school students united by our passion for STEM and Robotics. We are all excited to gain new experiences and most importantly show the world what Kosovo is capable of. As a team, our goal is not just learning how to build robots, our goal is to use this year's theme "Hydrogen Horizons" and the knowledge we get from this experience to help make our country better.







Our love for the world of robotics and technology brought us together, and we are here to share that passion with you. Team Kuwait was founded with the aim of exploring our fascination with technology and creating innovative solutions. Each member brings different skills, experiences, and perspectives to the table, allowing us to contribute to a variety of projects as a cohesive unit. Our biggest goal this year will be to work to popularize robotic studies both in our own school and throughout Kuwait.





TEAM KYRGYZSTAN



Team Kyrgyzstan is a unique combination of diverse, but united future innovators from different regions of Kyrgyzstan. Despite our distinct academic backgrounds, we became friends as soon as we met each other. We have been enjoying our journey together while learning a lot from each other. STEM plays a significant role for each member and we dream about becoming professionals in this sphere by contributing not only our regions, but the world. Thanks to FGC 2023 we are becoming more confident in our dreams.



TEAM LATVIA





Team Lao People's Democratic Republic is excited to participate in *FIRST* Global for the third time. Our goal in joining this competition is to acquire and share our knowledge and experience with communities from all around the world. We hope to learn new ideas from other countries in order to develop ourselves, and then we plan on disseminating those helpful ideas into our country as well.





Team Latvia is a group of enthusiastic students united to solve complex tasks and build innovative robots. Our greatness emanates from our team's diverse backgrounds, all converging at the Centre of Creative Learning "Annas 2", which has created an innovative ecosystem. With a passion for science, technology, crafts, and arts, we approach challenges with a multidisciplinary edge. Guided by our mentors, our collaborative spirit, our global outlook, and our persistence, we are excited to serve as ambassadors of innovation from Latvia to the world stage.



TEAM LEBANON



Team Lebanon is a proud group of 13 bright minds, carrying the hopeful spirit of our country with us. Our team was born in June 2021 at the Robogeex Academy. We're not just students; we're future problem solvers, pushing through tough times with the power of STEM - Science, Technology, Engineering, and Math. For us at Team Technogeex, it's not just about the competition; it's about using our creativity to make a difference in our community and country.





TEAM LESOTHO



We are a team made up of different individuals from different backgrounds who have only one similar interest in education: STEM. Our team evolved from Impact School Maseru Lesotho. by which our country Lesotho is a geographically mountainous country with extraordinary highaltitude terrain. It is also known as the "kingdom in the sky" due to its elevation and its stunning natural beauty. A major goal of our team is to foster collaboration and teamwork among other members and of course to put our amazing country on the TECH map.



TEAM LIBERIA



Team Liberia has brilliant students who, along with their mentors, have worked tirelessly to build a robot that will not only serve the function of this year's *FIRST* Global Challenge, but also be used as a landmark to help solve some of the pressing issues in our country. We are made up of 8 students and 5 mentors, and we cannot wait to meet with the other teams and share all that we have learned with them.





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TEAM LIBYA

Team Libya consists of 5 students from the FTC Team 18422 Wizards, who were selected from 90 teams distributed across our country. Although each team member has at least two years of experience in robotics, we make it our goal to always keep learning new things. Above all else, we are enthusiastic about collaborating and competing alongside such a large number of teams and representing our country on a global scale.



TEAM LITHUANIA



Team Lithuania is formed from FIRST robotics team "Lituanica X". For more than five years, "Lituanica X" has acted as an ambassador for robotics and STEM in Lithuania. The team also strives to be an ambassador of STEMpassionate girls as well. Therefore, this year Team Lithuania is primarily made up by girls. We believe that each team member fortified with knowledge and experience from robotics and outreach activities will help the world to face challenges that lay ahead.



TEAM LUXEMBOURG





TEAM MADAGASCAR



Team Madagascar is excited to participate in the seventh edition of the *FIRST* Global Challenge, bringing together a new group of 8 students and 2 mentors. The team's composition encompasses diverse interests and aspirations. We strive to combine our knowledge, creativity, and determination to make a meaningful contribution to the world. Together, let's embrace the power of STEM and inspire others to join us in building a brighter future.



TEAM MALAW

Team Malawi is made up of 8 students with a diverse array of interests. Outside of robotics, our team members enjoy guitar practice, sound engineering, cars, baking, reading, and basketball, among others. We are all aged 14 to 18 and look forward to sharing our ideas with other people and seeing how we can improve them.









TEAM MALAYSIA



Team Malaysia comprises eight members, with five individuals in the technical team and three in the non-technical team. As a team, we take immense pride in our alumni, who actively contribute back to the community. Having exhibited impressive performances in the last two online editions, Team Malaysia is resolute in our goal to come back stronger and achieve unprecedented excellence.





TEAM MALDIVES



Team Maldives is a group united by our interests in programming and robotics. We are students from the southernmost island of the Maldives, Seenu Atoll, also known as Addu City. While our journey into robotics might mark us as novices, our commitment knows no bounds. Proudly representing our nation, we're driven by the desire to catalyze positive change within our community and on a global scale.



TEAM MALI

Team Mali brings together talented members with a diverse set of skills. We share a variety of interests, particularly in the field of robotics and STEM. Despite our differences, we all work together to achieve our common goals. Our passion for robotics guides us on a path that allows us to develop our skills and potential while exploring the fascinating aspects of *FIRST* Global robotics. More than anything, We are determined to proudly represent our country and give our best to succeed.





TEAM MALTA

Team Malta is a dynamic group of four young girls who are passionate about technology, coding, and problem-solving. Comprising four students and two mentors, we are ready to tackle the challenges of the *FIRST* Global Challenge and showcase our skills on the world stage. Our team is dedicated to pushing the boundaries of robotics and embracing the collaborative spirit that this competition embodies.







TEAM MARSHALL ISLANDS



Team Marshall Islands couldn't be more excited to be part of this beautiful journey of learning and robotics. Our team is composed of five committed students from five different schools. This year's theme "Hydrogen Horizon" matters to us because it's a clean and renewable source of energy that can help reduce / mitigate the effects of climate change, which is an issue that not only our country is facing but every other country around it.





TEAM MAURITANIA



We're Team Mauritania, a spirited group of young minds hailing from the vast desert landscapes and vibrant communities of Mauritania. With a passion for science, technology, engineering, and mathematics (STEM), we are on a mission to ignite the flames of innovation in our nation and beyond. Team Mauritania is here to prove that innovation knows no boundaries. With our experiences, knowledge, and unwavering determination, we aspire to make a lasting and positive impact on the world.



TEAM MAURITIUS



Team Mauritius is a group of talented and aspiring young minds who couldn't be more excited to participate in the 2023 *FIRST* Global Challenge. The theme of this year's competition, "Hydrogen Horizons," perfectly aligns with Mauritius' commitment to sustainable development. As a team, we are determined to leverage our skills, knowledge, and collaborative spirit to address key sustainability issues facing our world today.



TEAM MEXICO



Team Mexico is made up of high school students who participate on our school's robotics team. We believe that one of the best characteristics of this event is the opportunity it offers to get to know other countries and their cultures. Learning about other cultures helps you open your horizons and helps you develop cultural awareness while talking about robotics. We are thrilled to learn about the other countries' robots and their experience solving this challenge.











We are five students from Pohnpei Island Central School in the Federated States of Micronesia. We are proud to be representing our island nation in this global competition.







Team Republic of Moldova is absolutely thrilled to be part of this year's "Hydrogen Horizons" edition of the *FIRST* Global Challenge. Representing our beloved Moldova, we are prepared to contribute to a future that is more sustainable and equitable for all. Though small in size, Moldova is known for its big heart and warm hospitality. We're tremendously honored to represent our charming homeland on an international platform as prestigious as the *FIRST* Global Challenge.



TEAM MONGOLIA





TEAM MONTENEGRC

A diverse team with students and mentors from different backgrounds can bring a wide range of skills, ideas, and perspectives to the table, which can be a great asset in robotics competitions and projects. Participating in the *FIRST* Global Challenge can be a life-changing opportunity for our team. Attending the *FIRST* Global Challenge provides us with a unique platform to inspire other students back home to pursue STEM fields and become future innovators.



Montenegro robotics is a team consisting of 5 students and 2 mentors from different regions and cities of Montenegro. Each member is special in every way and good at his job. When we come together, we achieve a harmony, complementing each other. Although we come from a small country, our desire and will to work and advance is great. We are really happy that we have the opportunity to show what we can actually do. The FIRST Global Challenge inspires us every year for new ideas that we try to implement in our country. We organize numerous STEM workshops using REV material among other things.



TEAM MORO((O



Team Morocco is delighted to participate for the sixth time in the FIRST Global Challenge. This year our team is made up of 5 high school girls aged 16 to 17. Our team has become each other's second families, united by our love of knowledge and discovery, and our desire for personal development. We believe that FIRST Global is not just a robotics competition, but also an opportunity to develop new skills and learn more about our abilities, as well as meet people from all over the world.





TEAM MOZAMBIQUE



Team Mozambique was founded in 2017 under a government policy in which each secondary and vocational technical school was encouraged to form robotics clubs as a way to bring more girls into science and engineering education. The team today consists of 30 students, of which 16 are girls and 14 are boys, spanning a wide range of ages.





TEAM MYANMAR



TEAM NAMIBIA



Kaung Thant Zin likes to know the process of building things like robots and how they can be controlled by a remote control. Han Phone Myat likes singing, dancing, relaxing, eating, having fun, traveling, sports, modeling, and being a top student. Myint Myat Ko Ko enjoys building robots, exploring new things, and playing football. Eakire Myint Tara is interested in weightlifting, badminton, planning, eating, and traveling. Shine Htut Paing has too many interests to mention, and joined the competition to experience working in a team.



Hailing from Windhoek, the capital city of Namibia, Team Namibia consists of five dedicated members, aged 16 to 17, with varying degrees of familiarity with robotics and coding who are deeply committed to their respective tasks. We bring a diverse range of unique skills to the table, fostering a culture of knowledge exchange and a shared motivation to expand our expertise in the STEM field. Our unity reflects the values of togetherness, peace, and diversity, embodying the spirit of Namibia.









TEAM NEPAL



Team Nepal is a group of 10 dedicated and enthusiastic students from various schools in the Kathmandu Valley. Our team members, aged between 14 and 16, share a passion for robotics, STEM, and coding, making us a diverse and knowledgeable group. In a world where sustainable energy is crucial for the well-being of our planet, "Hydrogen Horizons" is a theme that deeply matters to us. This year's FIRST Global Challenge provides us with a platform to share our ideas, collaborate with global peers, and pave the way for a greener, brighter tomorrow.







Team Netherlands is composed of the youngest students of *FIRST* Robotics Competition team 5412, Impossible Robotics, with students from multiple different schools located all over the Northern part of the Netherlands. Above all else, we are a Community and Outreach team, spreading Inspiration and STEM. We are working on rebuilding our educational system and creating a strong European *FIRST* Community where creativity is celebrated.







TEAM NEW ZEALAND



Team New Zealand, also known as the Blackbots, comprises students who have been chosen from various New Zealand FIRST® Tech Challenge teams. The team experienced recent success at the FLL Asia Pacific Championships and are now honing their skills for this next challenge. All 5 members also have 2 seasons in FTC and have competed at a National level. We are pumped to meet students from so many other countries and strive to do the best we can do for our own country. We come from a land of flightless birds, but we are born to fly!

TEAM NICARAGUA

Team Nicaragua is composed of 5 students from different educational backgrounds aged 14 to 17, each with different levels of robotics experience. Our team members have a variety of interests, including boxing, math, travel, design, and even participating in bridge building contests.



TEAM NIGER

As Team Niger embarks on our journey to Singapore, we are ready to showcase our innovative spirit and commitment to sustainable solutions. With 80% of our territory covered by the vast Sahara desert and the Sahel region, Niger faces the challenges of desertification and the impact of climate change. Our participation in the 2023 FIRST Global Challenge is a testament to our determination to combat these pressing issues. Together, let us embrace the Hydrogen Horizons and inspire change for a brighter future.





TEAM NIGERIA

Team Nigeria is made up of an incredible group of eight diligent students aged 14 to 18. five dedicated coaches, and a passionate mentor who all strive to achieve excellence in the realm of robotics. Our team members are all from diverse regions across the country, and we epitomize unity in diversity through our culture, traditions, thoughts, and ideas. Together, we strive to leave an indelible mark on the world of robotics and inspire the limitless potential within every Nigerian student.



Tolaram



TEAM NORTH MACEDONIA



We're a team of passionate young tech enthusiasts, ready to take on the robotic competition with our innovative ideas and teamwork! Gorjan is a certified fisherman and amateur mechanical engineer and electronics specialist. Viktor's hobby is programming and he's interested in robotics and automation. Gorijan enjoys meeting new people and participating in competitions. Jakov loves solving tricky problems and expressing ideas through applications. Gorazd believes robotics is a canvas for innovation and is committed to pushing boundaries and exploring the uncharted territories of technology. Our mentors are Alma and Georgina.





TEAM NORWAY

Team Norway consists of 5 team members, aged 15-16, and 3 team mentors. 4 of our members have experience in the FIRST Global Challenge from previous years, while we this year also have one new member. Our mindset when working with STEM is that we are never done learning. Therefore we are always open for testing out new ideas or improving our existing ideas. We hope this competition can contribute to creating international friendship, possible solutions for world problems, and last but not least lots of teachable and fun experiences.

TEAM OMAN



Team Oman consists of 4 students from our wonderful country. The team was established in October 2019 with the long-term aspiration to advance the skills of our students in practical and scientific areas. Our creative team members possess many skills and experiences in the fields of EV3 robot, electronics pieces and ARDUINO. These skills have enabled us to win in many championships, such as the SUMO game competition, robot Olympiad, and a cyber security competition.



TEAM PAKISTAN



Team Pakistan is a group of tech enthusiasts with a plethora of experience in robotics. Amidst growing political unrest and financial burdens in our country, the *FIRST* Global Challenge remains an annual imperative. Now, more than ever, such activities hold paramount significance to us, serving as a vital platform to raise awareness. We are immensely thankful for the opportunity to showcase our capabilities on a global scale.





TEAM PALAU



Team Palau is represented by Mindszenty High School, a private, non-for-profit Catholic Mission School situated in Koror, Republic of Palau. It is the nation's only private Catholic secondary school under the supervision of both the Catholic Vicariate of Palau and the Ministry of Education. We are the only high school in Palau with an active robotics program. By networking with our partners and sister schools, we hope to one day promote the course among all high schools to widen our outreach to a wider population.





TEAM PALESTINE

Team Palestine is fully represented by the letters in our name: Talented, Eager, Ambitious, Motivated (TEAM), Passionate, Admirable, Loyal, Easy-Going, Selfless, True-Hearted, Imaginative, Noteworthy, Exceptional (Palestine). Together, hand in hand, we help each other to embody all of these characteristics in order to bring to life the vision of Team Palestine in all of its glorious qualities.









How are you?! We are the Panama team and we are pleased to share this beautiful experience with you. Juan Alba is in charge of Audiovisual and Mechanics. Esteban Perdomo is in charge of Human Resources. Lucas Castillo is our Programmer, Alexander Ortega is in charge of Electromechanical, and Narcy Carrera is our Mechanic.





TEAM PAPUA NEW GUINEA



Team Papua New Guinea consists of 12 year-eleven students and three mentors from Lae Secondary School in Lae, Morobe Province. We are privileged to represent our country with over 8 million people and 800+ languages. We come from diverse cultures but we share the same passion for science and technology. Our members are a group of energetic, fun, and hardworking individuals who are excited about robotics and STEM. We want to use this opportunity through FIRST Global Challenge as a platform to exhibit our knowledge and skills in order to solve problems faced by our planet.



TEAM PARAGUAY



Team Paraguay is represented by the ASA Robogators, a team of talented students from the American School of Asuncion, Paraguay. Through the practice competitions we locally host, to engaging students in Paraguay, our goal has been to promote the growth of the *FIRST* Tech Challenge League in Paraguay. By sharing our experiences and knowledge gained from international participation and through communal relationships, we have actively contributed to this growth and will continue to do so in the future



TEAM PERL

Team Perú consists of students with different abilities, but a unified and innovative view of the future. Our diverse backgrounds and experiences bring a unique perspective to our team. We are excited and honored to represent Peru in the FIRST Global Challenge 2023. We are excited to collaborate with teams from around the world. and exchange ideas and work together to find innovative solutions that can contribute to a more sustainable future. This competition provides us with a global platform to share our ideas and learn from others, fostering a sense of global citizenship and collective responsibility.





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TEAM PHILIPPINES

TEAM POLAND



Team Philippines is represented by the DYCI Primes, a team of 5 students from a single school who share an unparalleled passion for achieving excellence. Our core strength lies in our collective drive to face every challenge that comes our way and emerge victorious no matter what the odds are. The DYCI Primes are prepared and determined to take on any circumstance that comes their way as they navigate through turbulent waters towards the horizon of a brighter tomorrow.





We are a team from Poland – an organized group of young people with a passion for robotics. We are working hard in the workshop, which is located in Kraśnik, in order to present ourselves as best as possible at this year's FIRST Global Challenge. In the team, we are divided into groups so that everyone can find their best in what they do. Throughout the building season, we are honing our programming, building and 3D design skills. We are looking forward to an amazing competition and to meeting new and wonderful people.



TEAM PORTUGAL





TEAM PUERTO RICC

Team Portugal comprises 5 students who all come from the same course and school— Management and Programming Technician of IT Systems at Escola Secundária Gago Coutinho. All of us on the team are very interested and motivated for such a big competition as the *FIRST* Global Challenge, and hope to have a big and fun experience in it.



Team Puerto Rico has come to Singapore from a small island in the Caribbean; a land of delicious food, incredible landscapes, contagious music, and leaders in innovation. It's an honor for us to participate in *FIRST* Global and follow in the footsteps of the 2022 FGC Team Puerto Rico, who achieved 3rd place in last year's competition in Geneva, Switzerland. We look forward to joining youth from all over the world in working towards a STEM-powered, cleaner future.





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TEAM ROMANIA

TEAM QATAR



Team Qatar, much like our country, consists of students from many different nations who attend schools all across Qatar. We have come together at Texas A&M University at Qatar's STEM Hub Robotics Club (the SHRC) to problem-solve and to represent Qatar in the 2023 FIRST Global Challenge. Curiosity, diligence, and fun fuels our passion in learning, creativity, and engineering. We are very excited about participating in FGC 2023 in Singapore, meeting all other teams, and discovering how we can impact global issues revolving around this year's theme.





Team Romania is represented by FTC 17713 | FRC 9001 Delta Force. Delta Force's story began in Romania, Arad, in 2018 when three students with a passion for technology decided to use their interests to make a change. A few years later, the team progressed and gained more and more members, becoming the first FRC team in Romania. We embark on a journey into the Hydrogen Horizons in order to unravel the endless possibilities that lie beneath this element. We are honored to represent Romania in the FIRST Global Challenge!

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TEAM RWANDA











Team Saint Kitts and Nevis is made up of a dynamic group of eleven exceptional minds radiating innovation like constellations in the Caribbean sky. Our journey began as a modest endeavor, but has transformed into a fervent exploration of STEAM's infinite realms. We're excited to represent our country on the world stage, a land where sandy shores meet tropical rainforests, and vibrant coral reefs dance beneath the waves, composing a symphony of natural marvels.



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TEAM SAINT LUCIA



Team Saint Lucia is a group of talented and passionate students, aged 13 to 18, hailing from different schools across the island. This is the first representation of St. Lucia at *FIRST* Global since 2018. This year's team was founded by two adults who had been student participants in the 2017 FGC in Washington, DC. With diverse interests ranging from sports and music to STEM education and environmental sustainability, Team Saint Lucia represents a wellrounded and determined group.





Team St. Vincent & the Grenadines is a group of 2 mentors and 5 students who are very excited to be a part of an event that unites nations throughout the entire globe. Our goals are to inspire youth to be creative innovators, collaborate with other nations and learn from one another, and to show our youths that anyone can impact our world positively once they put their minds to it.









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TEAM SÃO TOMÉ AND PRÍNCIPE



Team São Tomé and Príncipe this year consists of 5 students, one teacher, and the headmistress of the Escola Portuguesa de São Tomé e Príncipe. We are highly interested in robotics and STEM and hope to grow interest in the use of new technologies in other students in the country. We are all motivated to participate in the challenge and consider it a center of development in our lives.





TEAM SAUDI ARABIA

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FIRST Global Team Saudi Arabia seizes the opportunity to collaborate with youth from around the world at this one-of-a-kind "hands-on, minds-on" competition. Saudi Arabia's participation in FIRST Global highlights the nation's commitment to nurturing voung talent in STEM fields. This team, comprised of ambitious and innovative Saudi youth, joins forces with peers globally to tackle realworld challenges through robotics and technology. This international stage not only showcases their skills but also fosters cross-cultural understanding and friendship, forging a brighter future for STEM education and global cooperation.


TEAM SERBIA





The Senegal robotics team, affiliated with The Senegalese American Bilingual School, is an outstanding team that excels in the FIRST Global Challenge competitions. Composed of five talented and dedicated members. here is the list of these robotics enthusiasts: Sidy Ahmed Mboup, Mouhamed Pascal Cissé, Adja Diodio Mbenga, Lancet Cissé, and Oumou Khairy Thioye. These young minds are committed to tackling challenging technological problems and actively contribute to the promotion of STEM education in Senegal.



Team Serbia is thrilled to be participating in this year's FIRST Global Challenge in Singapore, following the fantastic experience we had last year. Our group consists of seven male students. each with unique personalities and life aspirations, yet united by a shared enthusiasm for STEM subjects. Our goal is to acquire knowledge and valuable experiences that will serve us well in the future. We are dedicated to gaining insights about the world's future, with the intention of influencing policies and shaping educational initiatives accordingly.





TEAM SEYCHELLES





Team Seychelles comprises 10 young students from both private and public high schools. All of our students have come together as a team and are keen to learn about the wonders of robotics and how impactful on the world it can be. We are absolutely thrilled and very passionate about this year's *FIRST* Global robotics Challenge and cannot wait to share their own ideas of preventing carbon emissions in our modern day and age.





Team Sierra Leone is composed of 6 students from a number of different high schools. The team is eagerly anticipating the opportunity to demonstrate their capabilities to the world. We are excited to witness the participation of our fellow young innovators in this year's Solution Challenge for the FGC, and are enthusiastic about the potential outcomes.



TEAM SINGAPORE



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Team Singapore is excited to be the host nation of the 2023 FIRST Global Challenge. Composed of students from Anglo-Chinese School (Independent)'s Robotics Technology Society, the team includes people from a variety of backgrounds. With an arsenal of unique talents and complementary skills, our team is ready to take on the world and put Singapore on the map once again. With a spirit of excellence and the drive to succeed, we anticipate a time of fun and learning to take place through our interactions with different teams from around the world, revealing a new world of color and perspectives.



TEAM SLOVAKIA



Team Slovakia consists of the winners of the national qualifiers tournament, from the High School of Engineering, Trnava, and Secondary Grammar School. We are excited to partake in this competition because it is an opportunity to learn more about robotics, modern technologies, and STEM fields. We are a team of eight people with different abilities and minds, all of us coming together with the same purpose - to find solutions to problems of today using the universal language of science and technology. We cannot wait to to unite our minds in solving global challenges.



TEAM SLOVENIA



Team Slovenia is truly excited to present what a talented squad from a small nation is capable of producing. Alongside former participants that now mentor our team, we can't wait to show what we have to offer in the engineering world of problem solving. We believe that tomorrow is up to us, future engineers to solve. Lesson by lesson, project by project the seeds of Science, Technology, Engineering, Arts and Mathematics blossom into something that will make the future great.



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The students of *FIRST* Global Team Solomon Islands have a passion for engineering and tech-related career pathways. The *FIRST* Global Challenge demonstrates all of the opportunities that are possible, both now and for their futures. The participation of this hard-working team allows them to put their passions to the test on a global stage.







TEAM SOMALIA



We thank the organizing committee for taking this challenge. We are happy as a Somali community that we can demonstrate the capabilities and skills of our students and exchange knowledge and information with our friends around the world and be the best representatives of our dear countries. This country has a great history and presents many scientists, engineers and thinkers who have left their marks, and we hope to do the same.







Team South Africa, also known as the SpringBots, is a dynamic and innovative group of young minds driven by a passion for robotics and technological advancement. Our team has been making waves in the field of robotics using creativity, technical expertise, and collaborative spirit. One of our core strengths lies in our collaborative approach to problem-solving. Each member brings their unique skills and perspectives to the table, fostering a culture of teamwork and mutual support. We understand that true innovation comes from diverse ideas and experiences, and actively encourage and nurture creativity within the team.

JASON ENGLISH







Team South Sudan aims to mobilize and encourage South Sudanese youth from the age of 18 years and below to join and participate in STEM education activities. With the advancement of science and technology globally, we believe South Sudan has to double its efforts to compete for its rightful place in the world through innovation, science, and technology. Our goal is to promote the spirit of healthy competition and unity of purpose among young people, as well as represent our country on the world stage.





TEAM SPAIN

Team Spain bridges the nation's history of invention and innovation with the promising future of STEM education. Spain, known for its contributions to science and exploration, has a legacy of groundbreaking discoveries. Team Spain represents Spain's talented youth, showcasing their prowess in robotics and technology. In this unique competition, they collaborate with global peers, forging connections and advancing STEM fields while celebrating Spain's heritage of invention and exploration.









Team Sri Lanka consists of 11 students, aged 14 to 18, who have a wide array of interests and passions. Some of our team members have participated in *FIRST* Global before, while others have never worked with robots before at all. Outside of robotics, some of our hobbies include chess, math olympiad, badminton, football, basketball, cricket, and even sailing.





Meet Team Sudan, a group of passionate and determined youth who share a love for technology and a desire to showcase their country to the world. Despite the ongoing war in Sudan, our team has persevered and harnessed our passion for technology to create innovative solutions and make a positive impact in our community. We are proud to represent Sudan and are excited to share our knowledge and experiences with the world. Join us on our journey as we work towards a brighter future through technology.



TEAM SURINAME



Team Suriname has come to Singapore from the world's most forested country, located in the north-east coast of South America. We have taken part in FIRST Global since its inauguration in 2017 without missing one single year. Our mission is to empower, build confidence through skills development and inspire opportunities of success for many via our local prep, dedicated mentors' team and through the FIRST Global platform. This year our team is represented by 4 districts from our country, including the capital Paramaribo.





TEAM SWEDEN

Team Sweden is a group of 3 students from 3 different schools in Stockholm, the nation's capital. The team was selected based on their unique set of skills and their ability to combine those skills together. As a team, we are always willing to put our skills to the test and will certainly do so by participating in the 2023 *FIRST* Global Challenge. We're looking forward to making connections with people from all over the world!



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TEAM SWITZERLAND



Team Switzerland is proud to represent our country at the FIRST Global Challenge this year. Consisting of five young and enthusiastic people, we all share the love and passion for robotics and STEM topics. With Switzerland being one of the world's leading countries in engineering and international cooperation, we hope to bring these skills and values into this year's competition in Singapore. Through participation in previous years, we have learned to embrace Coopertition® and Gracious Professionalism, and are excited to prove ourselves in Singapore!



TEAM SYRIAN ARAB REPUBLIC



Team Syria for 2023 is our largest and most diverse ever! We have remarkable students that have been into STEM for years. Some of them already know Scratch, Electronics, Arduino, and Python. Some of them have participated previously in local scientific and robotic competitions. Each of them comes from a different school, and they're all on top of their classes. They're not only good at STEM, but they're also athletes, artists, and musicians. They achieved all of that despite the fact their childhood was during the hardest years of the Syrian conflict. We're delighted to represent our country Syria in the competition.







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TEAM TAJIKISTAN





Team Tajikistan is a diverse group of young innovators, united by a shared passion for robotics and technology. We aim to make a lasting impact through our creative problem-solving and dedication to excellence in the 2023 *FIRST* Global Challenge. We hope to faithfully represent the people of Tajikistan, who are known for their warm hospitality, proudly preserve their rich cultural heritage through vibrant festivals, captivating music, and graceful traditional dances.





As a collective force, Team Tanzania forms an inspired and diverse group of young people, representing the future of STEM in the United Republic of Tanzania. Our individual passions and aspirations have converged to create a team that is determined to excel in the *FIRST* Global Challenge, showcasing our innovation, teamwork, and deep appreciation for the possibilities within the world of technology and engineering.



2023 FIRST Global Challenge

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TEAM TOGO

TEAM THAILAND



Team Thailand is a growing STEAM learning community of high school students who are passionate about technology and its impact on the world. Students who share our passion are welcome regardless of their skill level and personal background. Our five members are young innovators who believe in the power of collaboration. Fueled by the idea that robotics could transcend geographical boundaries and foster crosscultural connections, the team is excited to bring their invention to the global stage. Our mission is to share their experiences, learn from others, and collectively contribute to the advancement of robotics and technology.



Team Togo is a group of high school students who are enthusiastic about advanced technology and are driven and crave to know much more about technology and robotics. Our members are group-oriented people who believe in collaboration and team working spirit. Embedded on the idea that, thinking globally and acting locally, the team spirit is geared towards the achievement of daily tasks through robotic aid to facilitate life. The team is well motivated to showcase to the world the abilities and skills developed through robotics training.







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We are proud to be representing our home country nation The Kingdom of Tonga at the 2023 FIRST Global Challenge. The University of The South Pacific - Tonga (USP) is in charge of selecting the team members for Team Tonga. We are grateful and immensely excited to be back for a fruitful journey and challenges to face from this event.





TEAM TRINID

We at Team Trinidad and Tobago are beyond excited to appear yet again at the prestigious FIRST Global Challenge, this time in Singapore. Our excitement for this year's competition stems not only into the experience, but the ability to inspire the youth to follow in our footsteps. With heartfelt honor, we have willingly taken up this mantle because we aspire to be the people who inspire the world's youth believe in themselves.



TEAM TUNISIA

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Team Tunisia is composed of 15 passionate teenage students aged between 15 and 18 years old. Most of our team members are Coaches and Coach Assistants within the First Skills Club, where we share our knowledge with the youth and empower their English communication skills via modern technologies. Not only do we have a rich technical background, we also have solid interpersonal skills earned through different teamwork experiences, such as events and training camps. We aspire to learn new skills, forge lasting connections in the global Robotics community, and accomplish the unimaginable!



TEAM TÜRKIYE

Team Türkiye is represented by Bahçeşehir High School for Science and Technology, located in the capital Istanbul. Our team was established 13 years ago by boarding students on full scholarships who came from over 40 different cities of Türkiye in order to participate in the FIRST Robotics Competition. Overall we are very excited to be participating in FIRST Global Challenge as Team Türkiye for the 5th time in a row. We wish all the participating teams good luck and we can't wait to see you all!





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TEAM TURKMENISTAN



The FIRST Global competition helps us to grow robotics enthusiasts all over the world. Five of our members will represent our nation in 2023, Singapore, namely, Shatlyk Bashiyev, Shatlyk Batyrov, Batyr, Merdan and Muhammetnur. All of them are winners of various national and international robotics and science competitions. Our team members continue to educate and help the new generation with "Generation to Generation by OguzRobot." Since the start of FGC, understanding of technological advances, human resources of the world, the future is bright for all of us.





TEAM UGANDA

Team Uganda is an all-girls team and a testament to the incredible power of girls in action. Our team comprises five exceptional, passionate, and captivating young ladies hailing from different high schools across the nation. We are known for creating exceptional robots and we proudly stand as the foremost advocates for STEM education through the avenue of robotics in our country. We are excited to join our fellow robotic enthusiasts in Singapore, where we will undoubtedly learn, grow, and showcase the impact of our dedication.



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TEAM UKRAINE

Team Ukraine is a passionate and talented group of 5 students ready to take on the world with our innovative ideas and love for robotics. Together, Team Ukraine strives to change our country and shape a brighter future. With our unwavering passion, diverse talents, and love for robotics, we aim to overcome any challenge that comes our way, not only in Ukraine but also on a global scale. Watch out world, because Team Ukraine is ready to make a lasting impact!



innovative educational technology

INVENTOR



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Team United Arab Emirates is made up of 5 students with a passion for robotics, innovation, and sustainable solutions. We are thrilled and honored to represent our country in this year's FIRST Global Challenge. Our team's diverse expertise and unwavering commitment drive us to design, build, and program a robot that not only embodies the spirit of the competition, but also showcases the limitless possibilities of hydrogen technology. We are excited to collaborate with teams from around the world, share our unique perspectives, and forge lifelong connections.

TEAM UNITED STATES OF AMERICA



Team United States of America is composed of 9 members and 2 coaches, from the FTC teams 18438 Wolfpack Machina and 18224 Lupine. We're from Massachusetts, in the northeastern United States. We were honored to be invited to represent our country at the 2023 *FIRST* Global Challenge after winning the Inspire Award at the 2023 FTC World Championship. We can't wait to meet teams from all over the world and take this opportunity to further connect with the global STEM community.



TEAM UZBEKISTAN

FIRST Global Team Uzbekistan is motivated to promote student involvement in STEM in our country. We are excited to participate in the 2023 *FIRST* Global Challenge and present our country in front of the whole world, while making our small contribution to the big changes in mankind.









TEAM VANUATU



Team Vanuatu consists of eleven very positive, innovative and career-minded young people who come from different social and cultural backgrounds in Vanuatu. The team is coordinated by SMART Sistas Committee, a non-profit organization that has organized annual girls ICT camps in Vanuatu since 2016. Most of the members this year have no prior experience with building a robot since competitions in Vanuatu are almost non-existent. Regardless, with enthusiasm, this team is very confident.





TEAM VENEZUELA

Team Venezuela consists of six gifted young individuals, each possessing unique skills and abilities. Together, we share a common purpose: to represent our country to the best of our abilities, upholding values such as integrity, discipline, perseverance, effort, and courage. This year, to select our national team, we organized the first-ever FTC-like competition in Venezuela, the Copa Ka'i 2023. We are thrilled about the opportunity to connect with like-minded youth from across the world, united in our mission to make the world a better place!



TechCreativos





After the success of the Vietnam Robotics Challenge (VRC) - a nationwide robotics competition, 11 members from various regions across Vietnam were carefully selected to be Team Vietnam for FGC 2023. We aim to build and develop a thriving robotics community. Over the years, we have joined hands to organize numerous robotics competitions, including VRC, which reached over 490 students and 100 teachers, with the participation of 70 high school teams nationwide. Each of us contributes to this mission, and we strive to make a positive impact on our society.





TEAM BRITIS

We are proud to be making *FIRST* Global history as the very first team from the British Virgin Islands to compete in the *FIRST* Global Challenge.







TEAM US VIRGIN ISLANDS



Team U.S. Virgin Islands is a group of 3 students and 2 mentors from the island of St. Croix. St. Croix is not only the largest island in the territory, but also the former home of future founding father Alexander Hamilton. It is also the easternmost part of the United States. We are looking forward to meeting and collaborating with other teams from around the world and doing our part to find solutions to our world's technological challenges.







Team Yemen consists of 8 students plus a mentor, a coach and a media person. All of our students are studying at the secondary level and are in different schools. Though we all live far away from one another, this does not prevent us from communicating daily through social media and meeting at leisure and on public holidays. We look forward to placing our country, Yemen, in the ranks of advanced countries. scientifically and technologically, despite the difficult circumstances that our beloved country is going through. Our passion for science and knowledge, love and peace, unites us.



TEAM ZAMBIA



We are the Zambia Robotics team. We are a flagship STEM program serving as a platform for young minds in Zambia for those who want to be innovators, scientists, or people who want to break the status quo.





TEAM ZIMBABWE

In this day and age, when the next threat of pandemic proportions is Artificial Intelligence, parts of the world are at war and Southern Africa's fragile electricity system threatens the daily routine of every profession imaginable, it may be tempting to question whether the youth of our generation will make it through. History has taught us that adversity spawns ingenuity and Team Zimbabwe is the product of perseverance, resilience and the supernatural power of STEM education igniting the minds of our generation. Our team is composed of a talented variety of robotics enthusiasts who are eager to compete and learn from other young minds across the globe in the FIRST Global Challenge.



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THIS YEAR'S *FIRST* GLOBAL CHALLENGE IS A HUGE STEP FOR US. IT'S A CHANCE TO LEARN MORE, BOOST OUR SKILLS, AND SHARPEN OUR THINKING. IT'S NOT JUST ABOUT THE COMPETITION; IT'S ABOUT USING OUR CREATIVITY TO MAKE A DIFFERENCE IN OUR COMMUNITY AND COUNTRY.

TEAM LEBANON



Making Big Bets for Humanity

The Rockefeller Foundation is proud to support the 2023 FIRST Global Challenge and its pursuit of bringing together and inspiring youth to solve the world's most pressing problems through the promise and power of science and technology.







HELP US TO CONTINUE EMPOWERING THE NEXT GENERATION OF STEM LEADERS AROUND THE WORLD.

LEARN MORE:

FIRST.GLOBAL

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BE A SUPPORTER >