

2020 | ANNUAL 2021 | REPORT

Robotics Education & Competition Foundation

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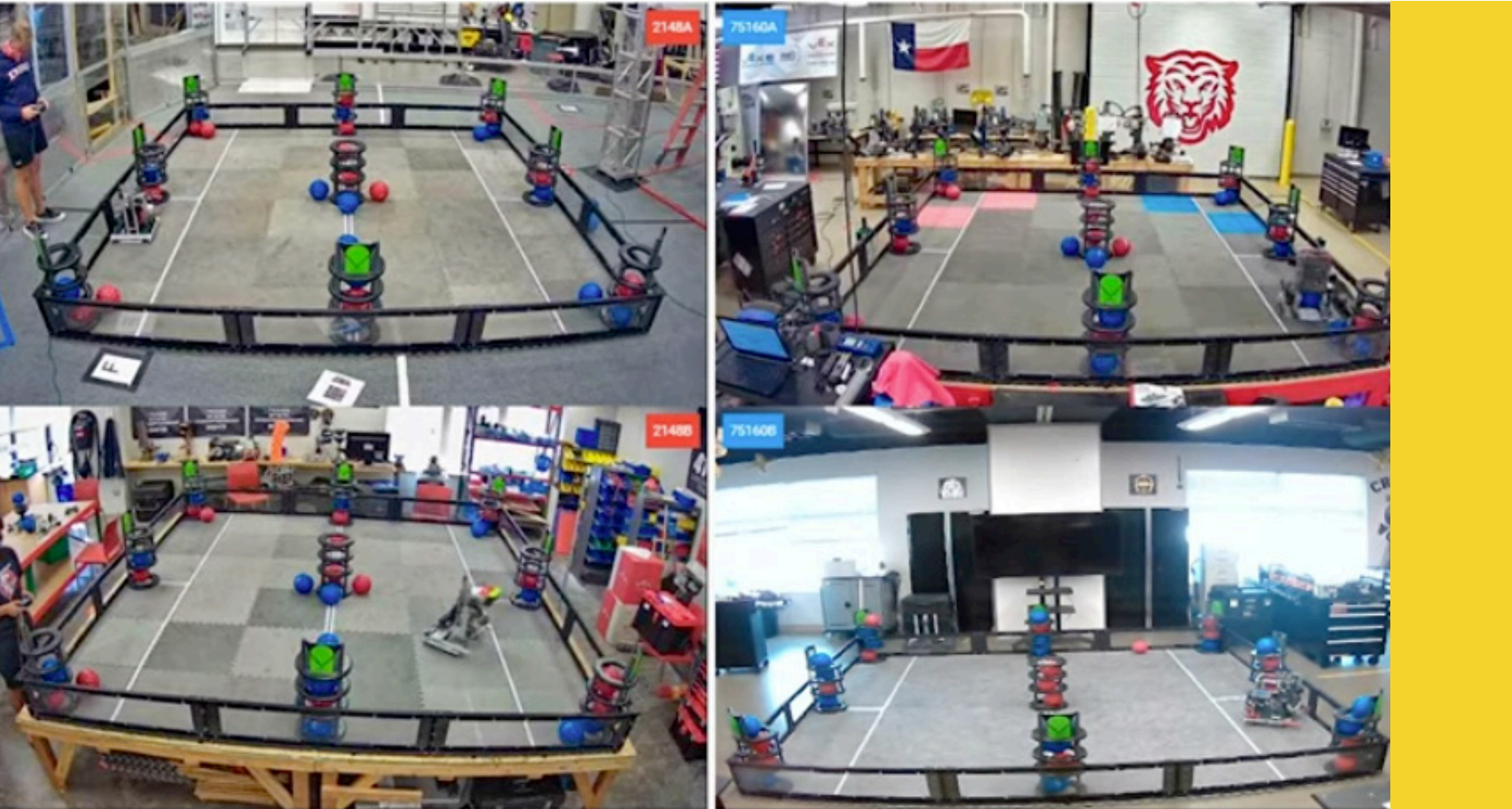
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roboticseducation.org
robotevents.com



INTRODUCTION

When the VEX Robotics Virtual World Celebration concluded in April of last year, the REC Foundation was already hard at work on something special. Given the many restrictions in place necessitated by COVID-19, I posed the question: “How can we provide an avenue for a meaningful, competitive robotics tournament while still keeping participants safe?” Always up for a challenge, the REC Foundation and VEX worked together to come up with a solution to this issue, and the VEX Live Remote Tournament was born.



FROM THE CEO

Through an incredible confluence of technology, innovation, and countless hours of hard work, teams from across the country and around the world were able to participate in VRC and VIQC matches remotely for the first time. All that was needed was free specialized software and an off-the-shelf webcam, and teams were plugged in to all the elements that students expect from an REC Foundation competition, including emcees, robot and notebook inspection, and real-time rankings and match results. This model carried through to VEX Worlds, where 1,400 teams competed in VRC Change Up and VIQC Rise above matches remotely. It was a wonderful experience and a testament to the passion and ingenuity our community displays when faced with a seemingly insurmountable obstacle.

While I am so proud of this accomplishment, there is so much more to celebrate at the REC Foundation. Hundreds of students participated in Online Challenges with topics ranging from Annotated Programming to STEM Research to robot photography. Our completely virtual drone competition (VRAD), saw alliances battle for supremacy on the surface of a fictional Martian landscape. Girl Powered workshops Powered by Google were held throughout the year as we continue to work towards equity for all in STEM fields.

As I look towards the future, this year was a great reminder of how important innovation in STEM is in creating a more connected world. The diversity in REC Foundation programming, and those who participate in it, made the Live Remote Tournament possible, and put our spirit of resilience and teamwork on display for the world to see. I am certain the lessons learned this season are ones our students will carry with them for a lifetime.

Thank you to our sponsors and everyone else who made this season possible, and a huge congratulations to the World Champions, Online Challenge Winners, and Inspiration All-Stars. It is my greatest hope that we will once again gather together in person for VEX Worlds 2022. Until then you have my heartfelt gratitude for your continued support of the REC Foundation’s mission and vision.

DAN MANTZ
CEO & Chairman of the Board

OVERVIEW

Accessible Competition Options

Teams continue to engage in our programs this season in a variety of ways to meet their local, state, federal, or any other government ordinances regarding Covid-19 safety procedures, social distancing, and best hygiene practices.

In-Person Events

All approved events and event attendees are required to follow all local, state, federal, or any other government ordinances regarding Covid-19 safety procedures, social distancing, and best hygiene practices.

Remote Skills Events

A "Remote, Live" Skills-Only Event is an event held exclusively via a live online video platform organized by an Event Partner. The intent of a Remote, Live event is to replicate the competition experience of an "In-Person, Live" Skills-Only Event as much as possible.

Live Remote Tournaments

This season, registered teams can participate in VEX Robotics Competition and VEX IQ Challenge matches remotely using the Live Remote Tournament interface within RobotEvents.com.



PROGRAMS

The Robotics Education & Competition Foundation sparks interest in science, technology, engineering and math (STEM) by engaging students in hands-on, sustainable, and affordable curriculum-based robotics programs.

VEX Robotics Competition (VRC)

Perfect for the Live Remote Tournament format, this year's VRC game was CHANGE UP. Change Up requires two alliances to compete in matches consisting of a fifteen second Autonomous Period, followed by a one minute and forty-five second Driver Controlled Period. The object of the game was for alliances to outscore the competition by placing a series of balls into goals or arranging them into lines.

VEX IQ Challenge (VIQC)

The VIQC game for the 2020-2021 season was RISE ABOVE. In Rise Above, teams use two robots to compete in the Teamwork Challenge as an alliance in 60 second long matches, working collaboratively to score points. The objective of this game was to score as many points as possible with your alliance partner by scoring Risers in Goals, completing Rows and completing Stacks.

Robotics Education Foundation Aerial Drone Competition (RAD)

What an out of this world season for RAD! In 2020-2021, the REC Foundation launched its newest program, the RECF Aerial Drones Competition (RAD). In the new RAD game, teams journeyed to Mars to collect artifacts while navigating vertical obstacles. It's not all fun and games on the red planet, as pilots were tasked with avoiding radioactive artifacts that awarded points to the opposing team! RAD teams also flexed their coding muscles by competing in fully autonomous skills matches.

Girl Powered Workshops

Celebrating the International Day of the Girl was a year round affair with Girl Powered workshops! These workshops, both virtual and in-person, were hosted by members of our robotics community and designed to engage and inform young women about STEM and robotics opportunities they might not be aware of. Mark your calendars for next October when teachers, coaches, event partners, and mentors are invited to host their own Girl Powered Workshop in honor of International Day of the Girl.

Student Advisory Board

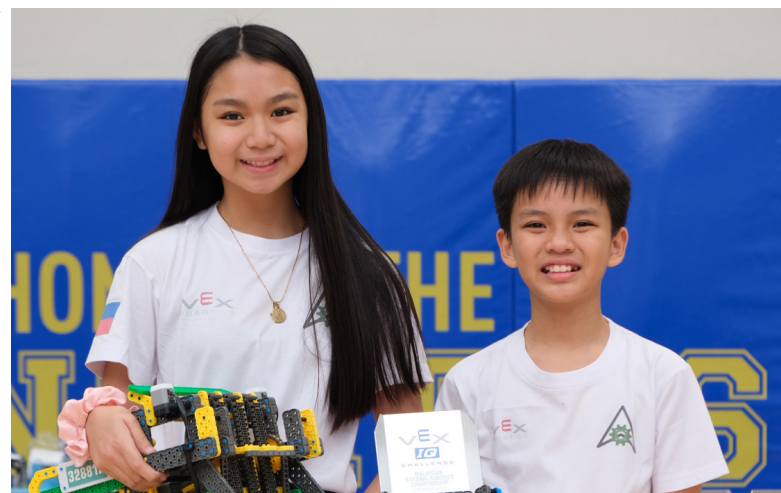
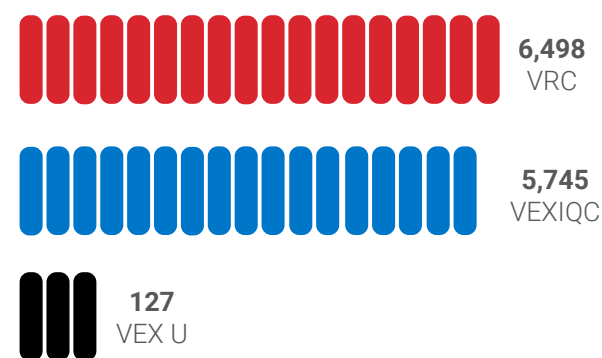
The Student Advisory Board (SAB) was formed to provide advice and competitor feedback on pressing student issues in the REC Foundation VEX Robotics Competition community. The Student Advisory Board's recommendations will help to influence student goals, services, and overall effectiveness of our robotics programs. We're looking for students to give us their opinions on how to make our programs more enjoyable in order to promote student success.

VEXGO

With the 2020-21 season we launched our pilot year for the VEX GO Challenge! Tailored for grades 3-4, this classroom challenge exposed young students to computer science and STEM concepts through hands-on fun!

PARTICIPANTS IN EACH PROGRAM

2020-2021



FINANCIAL HIGHLIGHTS

Revenue and Support:	Total		Program Services	General Operating Expenses	Fundraising
Contributions and Grants	\$10,287,856.00		\$10,287,856.00		
Event Income	\$3,428,955.00		\$3,428,955.00		
Total Revenue and Support	\$13,716,811.00		\$13,716,811.00		

Expenses:	Total		Program Services	General Operating Expenses	Fundraising
Compensation and Benefits	\$4,011,571.00		\$2,808,100.00	\$681,743.00	\$521,728.00
Advertising and Promotion	\$136,407.00				\$136,407.00
Office Expense	\$361,433.00		\$321,675.00	\$39,758.00	
Occupancy	\$321,108.00		\$285,786.00	\$35,322.00	
Travel	\$140,753.05		\$127,924.00	\$12,829.05	
Depreciation	\$11,670.00		\$11,670.00		
Insurance	\$7,894.00		\$7,026.00	\$868.00	
Event Expenses	\$5,932,439.95		\$5,889,235.11	\$2,358.00	\$40,846.84
Total Expenses	\$10,923,276.00		\$9,451,416.11	\$772,878.05	\$698,981.84



OUR SPONSORS

The Robotics Education & Competition Foundation is grateful for the generous support of our sponsors who partner year-round to provide team grants, and support local tournaments, state championships, and the VEX Robotics World Championship. We value their commitment to advancing student interest and engagement in STEM.

- AMSTI
- Dell
- Northrop Grumman Foundation
- Techpoint Foundation
- Autodesk
- Google
- Omron
- Tesla
- Bell
- Mathworks
- Palmetto Partners
- Texas Instruments
- Chevron
- Microchip
- Phillips 66
- VEX Robotics

2021 Live Remote VEX Robotics World Championship

In May of 2021, qualified teams from around the globe took part in the inaugural Live Remote VEX Robotics World Championship, presented by Northrop Grumman Foundation! Using off the shelf computers and webcams, teams were able to experience the same heart-pounding action and competition they expect from REC Foundation events while staying safely distanced. A huge thank you to the staff and volunteers who made it happen and to this year's world champions!

VEX Robotics Competition: May 17 - 22, 2021

VEX IQ Challenge: May 24 - 29, 2021



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