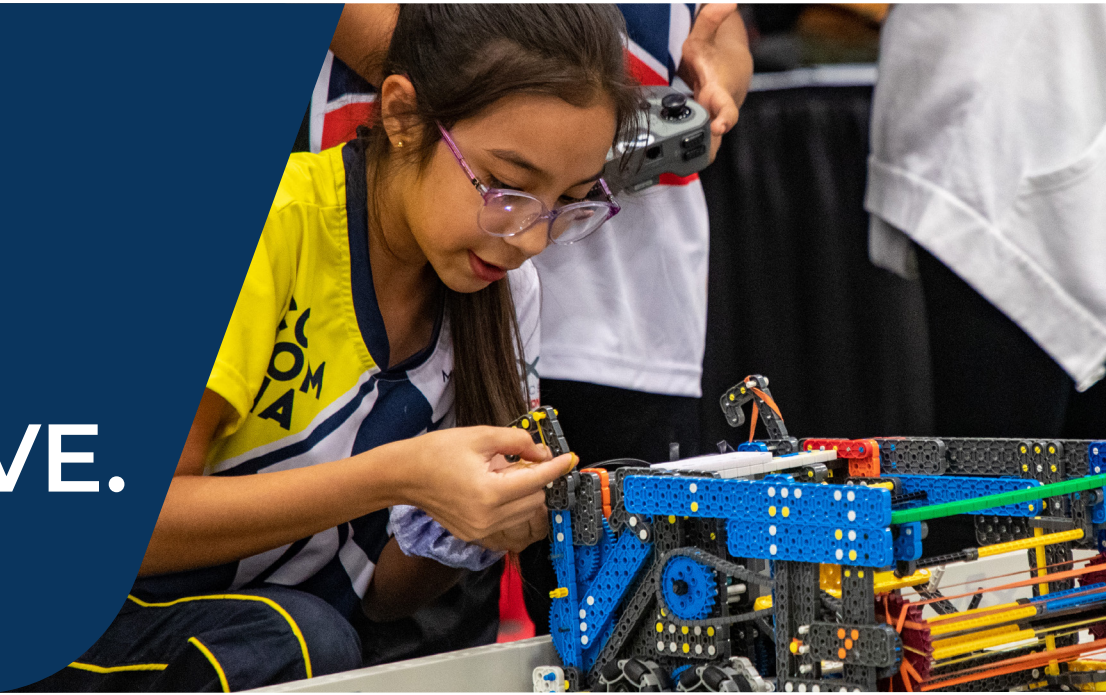




**BUILD.  
LEAD.  
ACHIEVE.**



Robotics Education & Competition Foundation  
Inspiring students, one robot at a time.



THE WORLD  
NEEDS MORE  
PROBLEM-  
SOLVING  
LEADERS.



# LETTER FROM THE CEO

## WORKFORCE READY

The Robotics Education & Competition (REC) Foundation's global mission is to provide every educator with competition, education, and workforce readiness programs to increase student engagement in science, technology, engineering, math, and computer science. Our robust community consists of hundreds of thousands of students, coaches, mentors, event partners, volunteers and collaborators from across the globe united in their passion for STEM.

It's our goal to use competitive robotics and STEM education programs to see students increase technical abilities while learning contemporary 21st-century workforce skills. Together we can all work together to build a bright future for our students.

**DAN MANTZ**

CEO and Chairman of the Board



# ABOUT US

# 70

COUNTRIES PARTICIPATE IN OUR PROGRAMS.

The Robotics Education & Competition (REC) Foundation is a US-registered 501(c)(3) non-profit organization that provides opportunities to engage today's students in hands-on STEM and computer science learning through affordable, sustainable, and accessible robotics education programs.

We see a future where every student designs and innovates as part of a team, overcomes failure, perseveres, and emerges confident in their ability to meet global challenges.

# WHY THE REC FOUNDATION



## AFFORDABLE

- Lower start-up costs than other STEM programs
- Grant support available to teams who qualify



## ACCESSIBLE

- Participation and success in our programs is possible for anyone, regardless of location and experience in STEM and robotics
- Programs are student-centered and focused around self-paced learning
- Educators can find support with free, easy to follow, hands-on STEM lesson plans with guided explorations
- Largest network of competition events worldwide



## SUSTAINABLE

- Kits and parts are reusable year-to-year, with the average robot kit lasting 5-7 years
- Programs are designed to grow with students as they progress in their education, starting in elementary school all the way to college

### Team and Event Support Structure

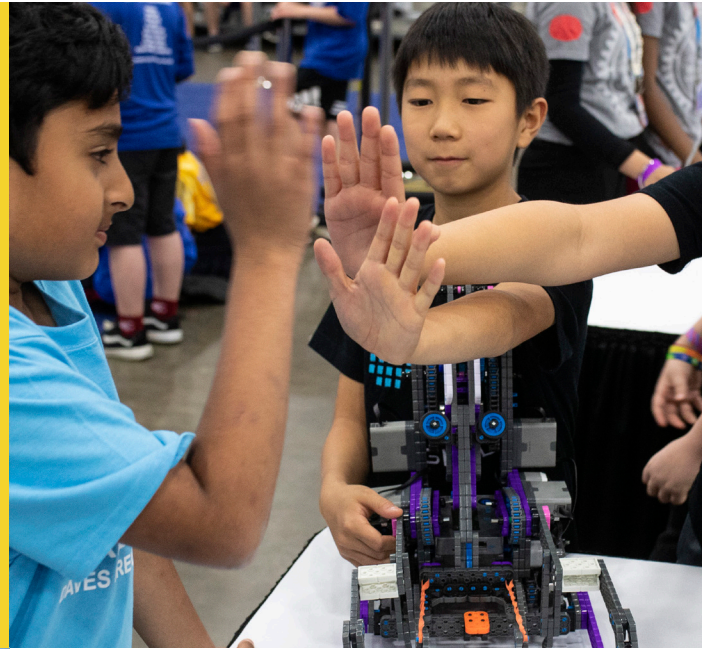
- **Event Partners:** Members of the robotics community that host competition events
- **Regional Managers:** Engage the local community and recruit Event Partners
- **Event Support Specialists:** Provide logistical and technical event support

# 400K

STUDENTS PARTICIPATED IN OUR PROGRAMS THIS YEAR.

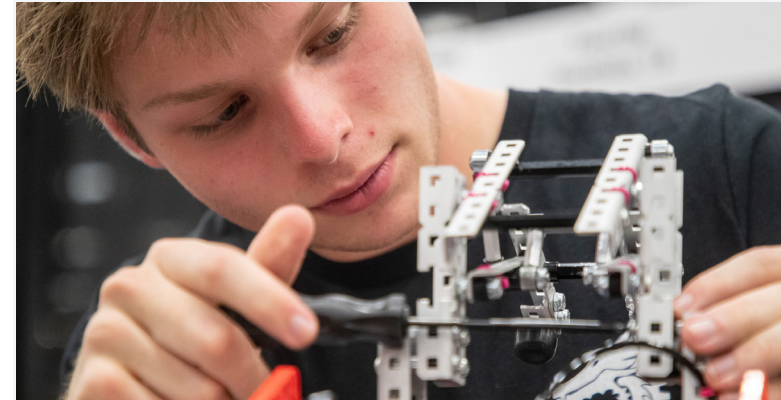
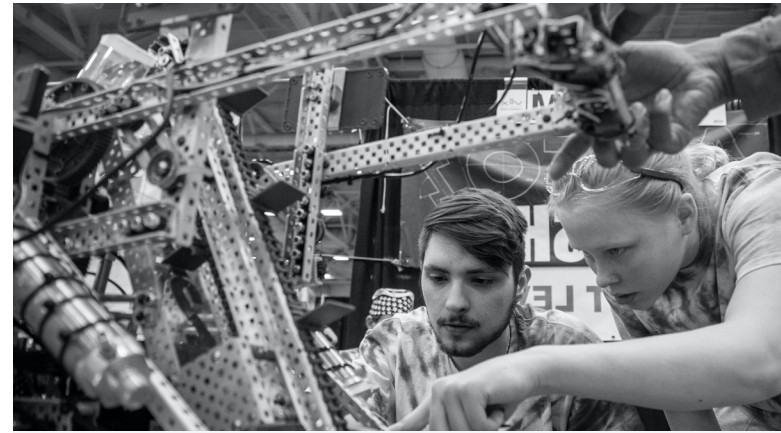
## WHY ROBOTICS?

*Students participating in REC Foundation programs develop problem-solving skills and learn programming fundamentals.*



## THE PASSION FOR STEM STARTS EARLY

A student's time in elementary and middle school is one of the most formative periods in a young person's life. The best way to instill lifelong interest in STEM is to provide learners a fun, engaging, and hands-on opportunity to explore and experience it for themselves.



## EASY-TO-USE SYSTEMS

REC Foundation curriculum options give educators the tools they need to help students design, build, and program robots that provide technical knowledge and build communication and teamwork skills.

Easy-to-use systems enable effective learning for both beginners and experts (ranging from elementary school to university).

*"I can hire these kids who are coming out of these programs directly into the workforce because they have all the skills that we look for. More importantly they know how to work on a team, they know how to program, they know how to deal with real-world systems, they also know how to deal with failures more importantly."*

*- Shivakumar Venkataraman  
Vice President of Engineering at Google,  
Parent, team coach and an Event Partner.*

# PROGRAM OFFERINGS

**LEARNING. EXPERIENCE. CONFIDENCE.**

Providing students access to educational and competitive STEM programs while in elementary school through college helps them gain valuable technical, interpersonal, and professional skills that equip them with the tools they need to succeed and the confidence to overcome any obstacle they may encounter.

## Competition Programs

VEX GO Competition

VEX IQ Competition (VIQC)

VEX Robotics Competition (VRC)

VEX U

VEX AI Competition

VEX Factory Automation Competition

JROTC Robotics

Aerial Drone Competition

REC Foundation Online Challenges

SkillsUSA Mobile Robotics Technology

TSA Robotics

Bell AVR Competition

## Educational Programs and Products

VEX Factory Automation Competition

VEX GO

VEX IQ

VEX V5

VEXcode VR

VR Skills



# RESOURCE OFFERINGS

**ENGAGING. SUPPORTIVE. MAINTAINABLE.**

## Educator Resources

Teacher Training (Virtual and In-person)

Educator Certifications

STEM Labs Curriculum

VEXcode VR

VEX Robotics Knowledge Base

## Student Resources

Alumni Program

Internship Program

Student Advocacy Program

Scholarship Program

## Team Resources

Dedicated REC Foundation Manager

Grants

Fundraising Resources

Team Resources and Downloads

Mobile App

International Robotics Honor Society

Tallo

Industry Certification Program

Micro Certifications

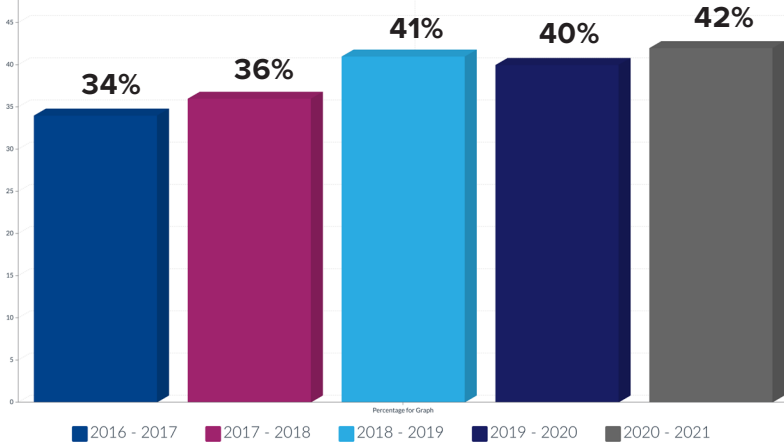
# DIVERSITY AND INCLUSION

## REDEFINING THE FACE OF STEM

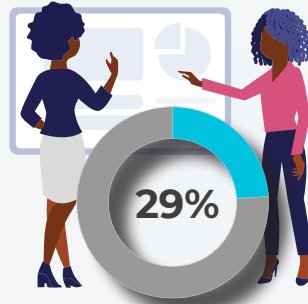
We believe that robotics and STEM is for everyone and strive toward an inclusive robotics community that reflects the diverse world we live in and the one we want to see in the future.

### Female Participation in Competitions\*

VEX IQ Programs

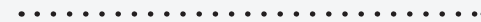


The REC Foundation strives to be a model for the inclusive society we envision for the future, and continues to push for greater equity among women and girls, individuals who identify as members of racial and cultural minorities, those with disabilities, the LGBTQ+ community, and other marginalized groups.



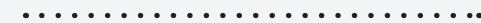
Currently, women account for only 29 percent of the STEM workforce, and the number in leadership decreases as the level of leadership increases.\*

\*Million Women Mentors



It is projected that **2.4 Million** STEM jobs in the U.S. will go **unfilled**.\*

\*[ssec.si.edu/stem-imperative](https://ssec.si.edu/stem-imperative)

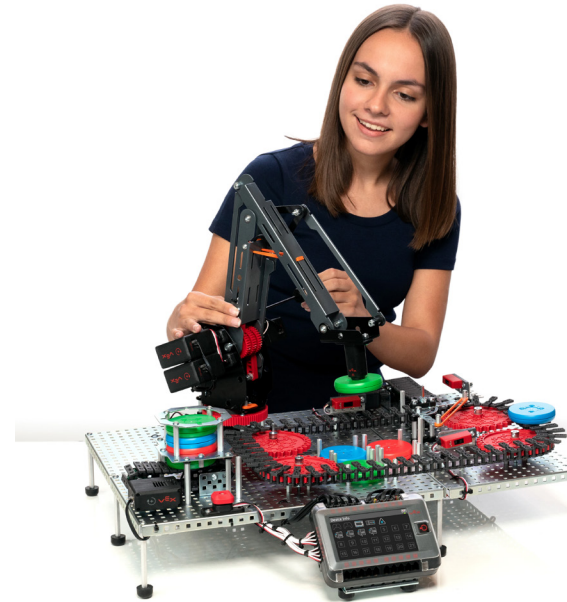


**Women represented 45%** of students majoring in STEM fields in 2020, **up from 40%** in 2010 and **34%** in 1994.\*

\*Based on data from the Integrated Postsecondary Education Data System (IPEDS)

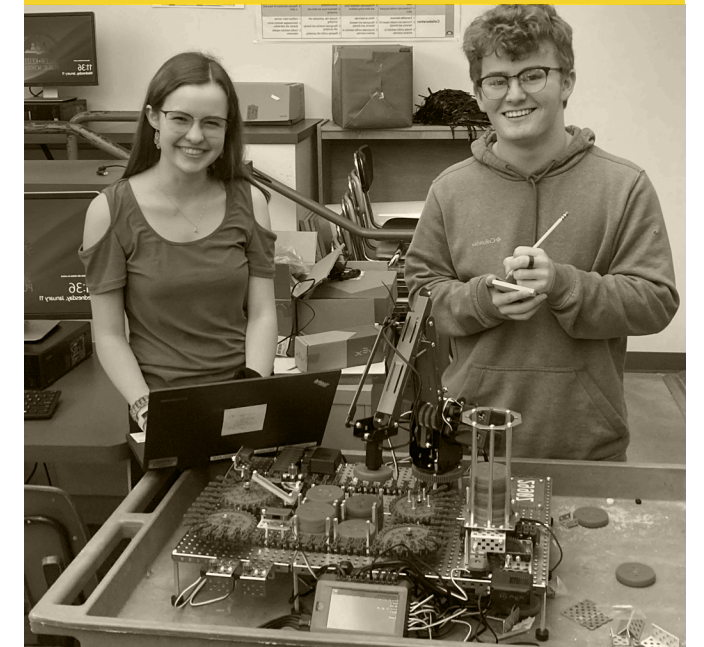
# FACTORY AUTOMATION

*Teaching workforce readiness is at the heart of what we do layering in an automated robotics challenge over real world manufacturing scenarios.*



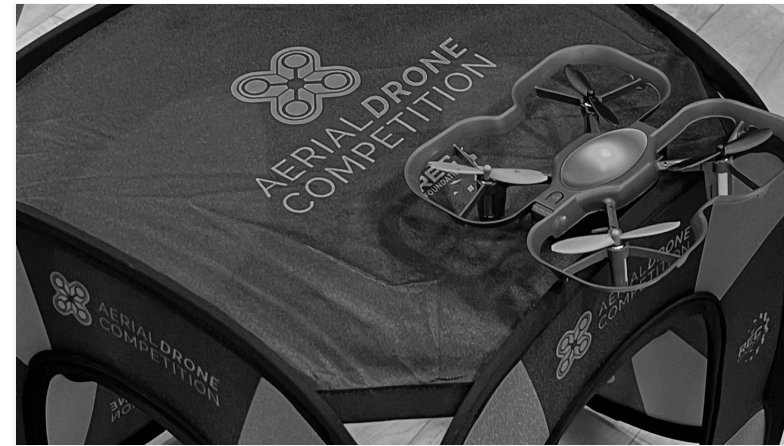
The REC Foundation aims to improve Workforce Development Education and interest by providing a clear path for students to prepare for advanced manufacturing careers.

The Factory Automation Competition is a classroom-based competition that provides students with essential and desirable foundational skills needed for today's advanced manufacturing careers. Students progress from education to workforce and beyond by engaging in hands-on curriculum.



# AERIAL DRONE COMPETITION

*The Aerial Drone Competition offers an exciting educational drone sporting event that focuses on hands-on, student-centered learning.*



# PREPARING FOR THE CHALLENGES FOR TOMORROW

Through a uniquely engaging combination of teamwork and iterative discovery, students execute a problem-solving process that resembles the same mindset used by engineers, designers, and virtually every other profession.

Competitions are open to Middle and High school students who compete in local and national events sponsored by the REC Foundation.

*"[Students] learn a variety of skills, from leadership development and team building to how to be resilient and better communicate with others, in addition to the technical aspects of programming and coding."*

*- Robbie Cross, Coach  
Mattie Thomas Blount High School*

# FUTURE INNOVATORS ON THE RISE

We believe the skills learned and nurtured in the Aerial Drone Competition will help students prepare for the challenges of tomorrow. Teams learn about drone mechanics, flight principles, programming, documentation, and communication skills, while expanding their understanding and building interest in drone-related workforce and career opportunities.



# WORLD'S LARGEST ROBOTICS COMPETITION

The REC Foundation and Northrop Grumman Foundation present the VEX Robotics World Championship. This event is the culmination of the robotics competition season and brings the top teams from around the globe together to celebrate their accomplishments, learn from one another, and compete to be crowned champions.



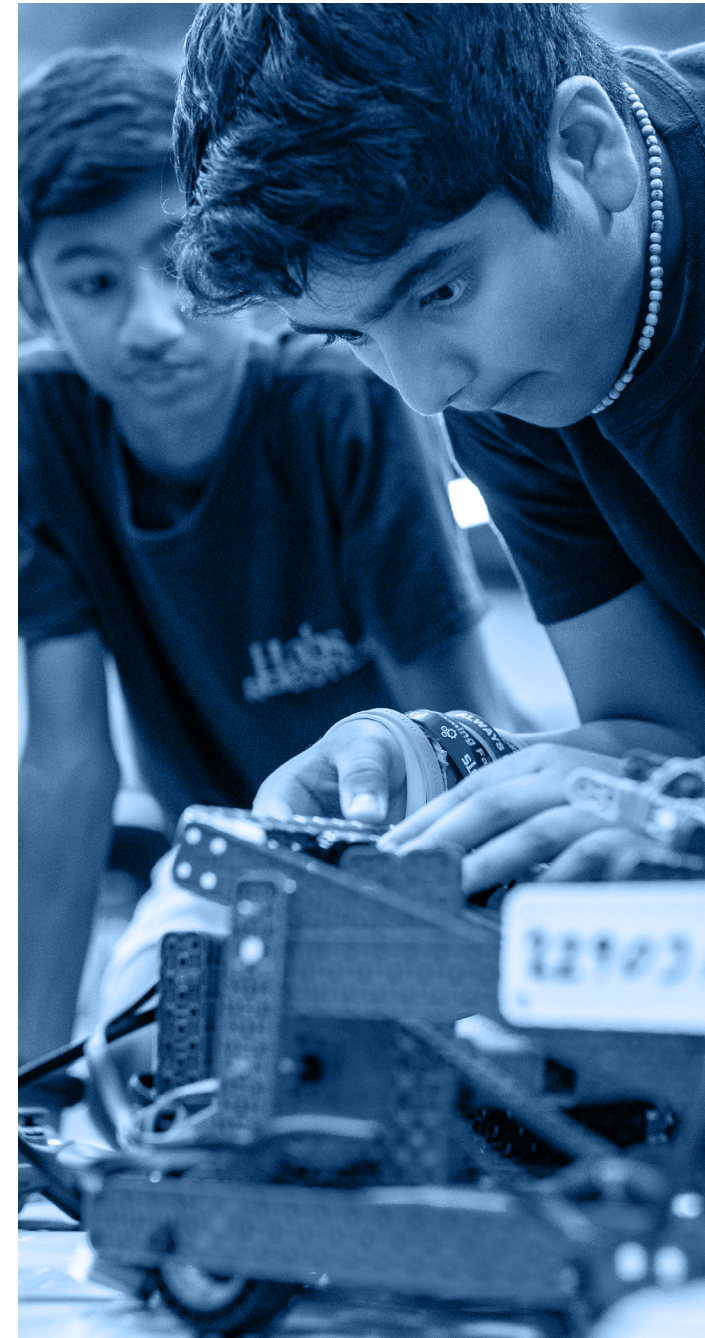
4K  
TEAMS

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40K  
ATTENDEES

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70  
COUNTRIES



*"This has really been life-changing for them in terms of experiences. Now most of my students are saying 'I want to become a mechanical engineer, an electrical engineer, and a biomedical engineer! These are possibilities now.'"*

*- Ramona Hutchins  
Hendley ES Robonauts, Team 75574A*



# Join our community

Discover what the REC Foundation can do for your school, students, and business. We are committed to implementing programs to help active learners develop STEM skills.

Let's Start Our Partnership! Start a team, volunteer at a local event, or become a sponsor.

## Contact Us

### Robotics Education & Competition Foundation

1519 Interstate 30 West  
Greenville, Texas 75402  
Phone: +903 401 8088

support@recf.org  
www.recf.org  
www.robotevents.com

