FIRST WISCONSIN

FIRST Wisconsin Annual Report

2023 - 2024

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From *FIRST* Wisconsin Leadership

Spotlight on Progress: Setting the Stage for the Future

FY24 Reflection from the Chair and Vice-Chair

The *FIRST* in Show season marked another year of forward progress throughout the *FIRST* Wisconsin organization as we begin to focus our efforts, establish long-term goals, and make the changes necessary to expand our reach across the state.

This year, our Board of Directors welcomed new members representing a variety of stakeholders who share in our desire to make FIRST accessible and encourage young people to pursue careers in STEM and related fields. To that end, the board spent a significant amount of time exploring the move to the district model of play for FRC.

The decision to submit a proposal for transition is not something we arrived at quickly or take lightly. We listened to the input of teams and leaders from across the FIRST community in Wisconsin. We explored all aspects of the move including event venues, volunteer pipelines, participant experience, and financial impacts, just to name a few.

In the end, we are committed to continuing to provide an inspirational and impactful experience for all the students participating in FIRST programs in our state.

The tireless efforts of our president, Renee Becker-Blau, should not go unrecognized. Her work has produced an increase in participation, an expansion of events, and an influx of financial support for teams across Wisconsin. Her knowledge of and experience with the district model has given the Board of Directors valuable information and insights which helped us move in a direction that supports our goal of increasing accessibility.

We look forward to her continued leadership moving forward.

Every Child, Every Program, Everywhere!

Chairperson
FIRST Wisconsin
Board of Directors
Jeff Fenstermaker

Jeff Fenstermaker

Vice- Chairperson
FIRST Wisconsin
Board of Directors
Sean Schuff

Sean Schuff

Purpose

Our Future: Built Better Together

FIRST Wisconsin exists to **prepare the young leaders of today for the world of tomorrow**. Through **mentorship** partnered with **hands-on learning**, **problem-solving** connected to **community engagement**, and **core values** applied in times of **intense competition,** *FIRST* Wisconsin provides **life-changing robotics programs** that give **young people** the skills, confidence, and resilience to **build a better world**.

Every Student. Every Program. Everywhere.

More Than Robots

FIRST® WISCONSIN

Our Future: Built Better Together

Vision

"To transform our culture by creating a world where science and technology are celebrated & where young people dream of becoming science and technology leaders."

Dean Kamen, FIRST Founder

Mission

The mission of *FIRST* Wisconsin is to ensure every student in the state has the opportunity to choose to participate in *FIRST*, a life-changing robotics program that gives young people the skills, confidence, and resilience to build a better world. Through a commitment to “Every Child. Every Program. Everywhere,” *FIRST* Wisconsin is making transformative STEM experiences accessible to all students, at any point from kindergarten through 12th grade, regardless of geographic location or zip code.

Values

DISCOVERY
We explore new skills and ideas.

INNOVATION
We use creativity and persistence to solve problems.

IMPACT
We apply what we learn to improve our world.

TEAMWORK
We are stronger when we work together.

INCLUSION
We respect each other and embrace our differences.

FUN
We enjoy and celebrate what we do!

Increasing Impact

Where we're headed: 2.4% by 2040

The Challenge: Limited Access for Wisconsin Students

As we reflect on student access to the *FIRST* program, one stark reality stands out: **a majority of Wisconsin students lack access to the transformative opportunities offered by *FIRST* programs.**

Out of the +430,000 students in 7th-12th grade, who are enrolled in private schools, homeschools, & public schools across Wisconsin, **only a small fraction—0.47%—are currently engaged in our programs.** Meaning thousands of young people are missing out on experiences that can ignite their interest in STEM, foster critical life skills, and connect them to future careers.

There isn't a question of whether FIRST works - there's data to prove it (*see page six*). It's a question of **how we can work together to make the program accessible to every student in Wisconsin?**

The Progress: From Three Teams to Hundreds

In 2000, Wisconsin had just THREE high school *FIRST* teams, reaching less than 100 students. By 2020, this number grew significantly, with 642 teams across all K–12 FIRST programs, impacting over 3,500 students annually.

While this progress is worth celebrating, **it's only the start of what's possible**. Expanding program access is essential to ensure even more students experience the life-changing impact of FIRST.

The Vision: 8,671 students participating in FTC or FRC by 2040

By 2040, FIRST Wisconsin envisions **2.4% of Wisconsin students in grades 7–12—approximately 8,671 students—actively participating in FIRST programs** through FIRST Tech Challenge (FTC) or FIRST Robotics Competition (FRC) teams. Achieving this vision will require supporting, sustaining, and providing programming for around **405 FTC teams, 124 FRC teams, and over 2,860 mentors**. While these numbers may evolve over time, they serve as a strong foundation for focusing on team sustainability and expanding program access across the state.

The overlap in age ranges between FIRST programs allows flexibility to **tailor solutions to community needs**. By collaborating with schools, community partners, and corporate supporters, FIRST Wisconsin can identify the "best-fit" program for each community, **providing students with age-appropriate tools and technologies aligned with local workforce demands and educational goals.**

By leveraging the strengths of FIRST programs and the potential of Wisconsin students, **we can bridge the gap in access** and empower the next generation of problem-solvers, innovators, and leaders. **Together, we will prepare students for success in high-tech careers while enabling them to make a lasting impact in their communities.**

Longitudinal Study

FIRST works and there's data to prove it...

The FIRST Longitudinal Study Final Report shares key takeaways about the long-term impact of FIRST on program participants. Conducted by Brandeis University, this unique multi-method longitudinal study followed *FIRST* participants and a matched comparison group over ten years throughout college and early careers. The final report was released in late 2024, and summarizes a decade of findings and also includes new data comparing *FIRST* students with a national data set from the National Center for Education Statistics.

The results show *FIRST* is having a proven long-term impact on participating students, extending into college and careers.

An Increase in STEM-Related Attitudes

Ten years after enrollment in the study, *FIRST* students and alumni are still roughly two times more likely to show an increase in STEM-related attitudes than comparison group students.

Higher Levels in STEM Outcomes for Female *FIRST* Students

At 10 years, female FIRST students and alumni are more likely to show significantly higher levels in STEM outcomes than comparison female students.

(Scan the QR to review the "The FIRST Longitudinal Study, 10 Years of Follow-up Data" final report)

Pursuing College Pathways in STEM

By their fourth year of college, FIRST alumni are significantly more likely to pursue college pathways into engineering and computer science than comparison students. They are more likely to be interested in majoring in computer science, engineering, and robotics; to take computer science and engineering courses; and to declare a major in computer science or engineering.

Building Pathways for Groups Historically Underrepresented in STEM

Underrepresented racial and ethnic groups in FIRST are significantly more likely to major in computer science or engineering. By their fourth year of college, **female FIRST alumni** are more likely to pursue STEM pathways.

Persisting into STEM Employment

FIRST alumni are significantly more likely to have employment in a STEM field and have **higher incomes than the study comparison group** and the national comparison group. Compared to a matched group of national young adults, **female FIRST participants** are more likely to work in STEM and earn significantly more.

Program Impact

FY23-24 Current State vs Long-Term Goals

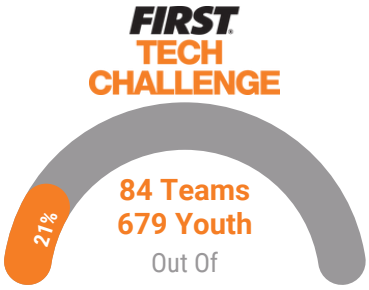
Number of FTC & FRC Student Participants Engaged with *FIRST* Wisconsin

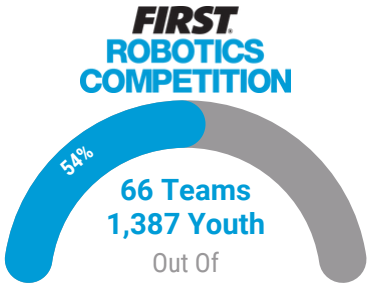
Current State of *FIRST* Wisconsin

FIRST Wisconsin Goals for 2040

FY24 Program Breakdown

2,066
Total registered youth enrolled in FRC/FTC in 2024





8,671
Total registered youth enrolled in FRC/FTC in 2040

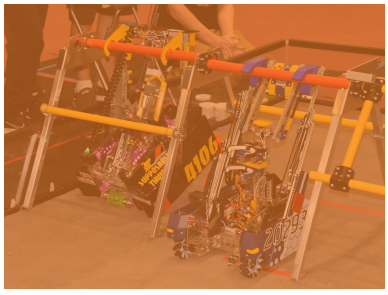
28%
Female student participants enrolled in FRC/FTC in 2024

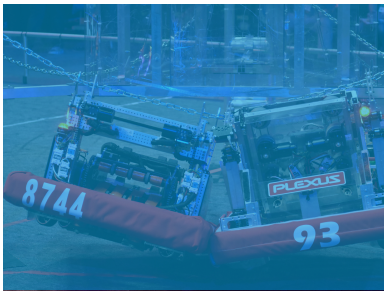
Increased by two percentage points from last year to this year & is up five percentage points from FY20

Increased by half a percentage point from last year to this year & is up three percentage points from FY20

35%
Surpass the national projected % of female STEM workforce participants by 2040

18%
Economically disadvantaged student participants who self-reported their status in FRC/FTC in 2024





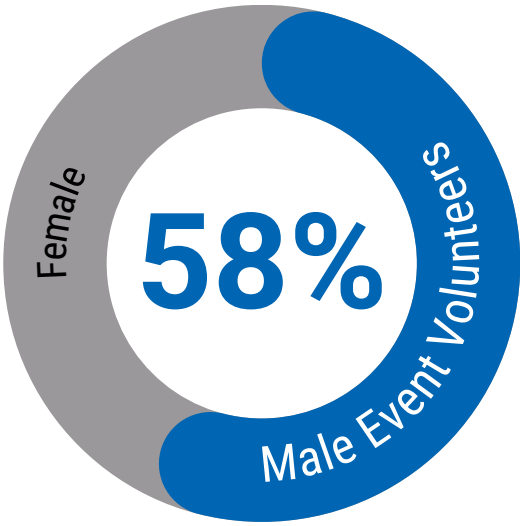
38%
Ensure economically disadvantaged students participate in FRC/FTC at representative levels by 2040

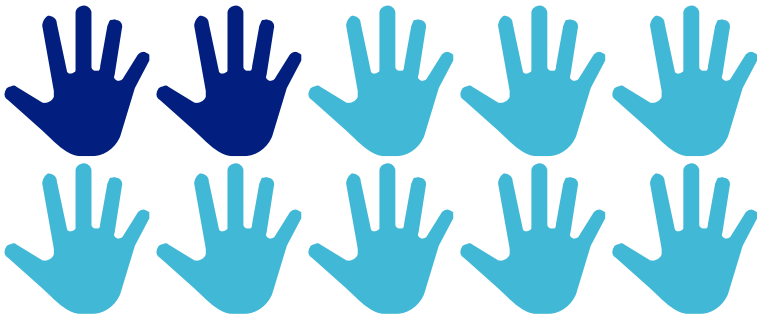
Race	FY23 FIRST Wisconsin	FY24 FIRST Wisconsin	State of Wisconsin (Pop. 2024)
Amer Indian	0.8%	0.3%	0.8%
Asian	15.8%	17.7%	2.9%
Black	2.9%	3.3%	6.2%
Hispanic	7.7%	8.5%	13.6%
White	68%	65.8%	82.5%
Two or More	4.8%	4.4%	5.4%

Ensure traditionally underrepresented students in STEM programming have the opportunity to participate in the FRC or FTC programs at levels that reflect the state's population by 2040

Program Impact

Supporting a Total of Nineteen Events





23.8%

Event Volunteers are FIRST Alumni

Event Volunteer Demographics

White- 64.3%

BIPOC- 35.8%

Financial Report

This report represents an event year estimate. Expenses carried over from previous event year (2022-2023 season) and income related to following event year (2024-2025 season) are omitted.

Income	2023-2024 Budgeted	2023-2024 Actual
Grants and Donations	**$487,365	**$525,854
FTC Event Registration Fees	$40,800	$43,000
Event Merchandise Commission	$3,000	$3,712
Interest Earned	-	$5,273
Income Total	**$531,165**	**$577,839**
Expenses	**2023-2024 Budgeted**	**2023-2024 Actual**
Employee/Contractor, Benefits, Travel	$169,500	$122,305
All other general operating expenses	$72,800	$56,142
FRC WI Regional Operating Expenses	$163,361	$169,600
FRC 7RR Operating Expenses	$88,173	$76,363
FTC Event Operating Expenses	$35,748	*$35,945
Expense Total	****$403,708**	****$301,317**
Balance in FY	$1,583	$117,484
Balance w/ Carryover	$384,930	$500,831

Items of Note

*FTC Operating Expenses – $16,900 are FTC QT Host Reimbursements

**Does not reflect $105,735 in grant funds passed through to teams

Thank You to Our Sponsors

Wisconsin Regional

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ARGOSY FOUNDATION

Milwaukee

Rockwell Automation

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RegalRexnord

CAPTAINS OF INNOVATION

GENERAC

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Johnson Controls

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Boyle Fredrickson S.C.

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Tormach

BOT BOOSTERS & ROBOT FANS

Eaton

Jeff & Karuna Fenstermaker

Thank You to Our Sponsors

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Paul and Judy Ulland

Dave and Barb Erickson

BOT BOOSTERS & ROBOT FANS

Optum Serve
Dairyland Power

C&C Machine
Xcel Energy

Kristin Flickinger

Board Leadership

FIRST Wisconsin Executive Committee

JEFF FENSTERMAKER
CHAIRPERSON
PRINCIPAL ENGINEER
GE HEALTHCARE

SEAN SCHUFF
VICE CHAIRPERSON
TEACHER
TESLA ENGINEERING
CHARTER SCHOOL

RYAN JIPP
TREASURER
VP OF ENGINEERING
BATTERY SYSTEMS
MILWAUKEE TOOL

DAVE WOODS
SECRETARY
SENIOR ENGINEER
REGAL REXNORD

FIRST Wisconsin Board of Directors

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DIRECTOR OF ACADEMIC ENGAGEMENT
ROCKWELL AUTOMATION

JASON FUHR
DIRECTOR OF CORE DESIGN ENGINEERING
CLARIOS

ARROW GUETSCHOW
PRESIDENT OF LAKESHORE FIRST ROBOTICS

JENNA JOESTGEN
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PLEXUS

JULI PICKERING
DIRECTOR OF CAREER SERVICES
COLLEGE OF ENGINEERING
UW- MILWAUKEE

DARRIN ROTHE
ASSOCIATE PROFESSOR
MILWAUKEE SCHOOL OF ENGINEERING

ERIN SIEMANDEL
EXECUTIVE DIRECTOR
PROGRAM MANAGEMENT
GLOBAL SERVICES
JOHNSON CONTROLS

MEGAN VOLKENING
PRESIDENT
FIRST WISCONSIN ALUMNI
UW-MADISON

Student Board of Directors

Leadership Team

BELLA
DIRECTOR OF MAR/COMM

NOAH
CO-PRESIDENT FRC

SID
CO-PRESIDENT FTC

DIYA
DIRECTOR OF PROJECT MGMT

NIDHI
COMMITTEE CHAIR

ISHA
COMMITTEE CHAIR

AMANDA
COMMITTEE CHAIR

JAI
COMMITTEE CHAIR

Committee Members

DE&I

AANYA

ANNALISE
***NIDHI**

Advocacy

DILLON
***BELLA**
***SID**

MATTHEW
***DIYA**

Education

GAVIN

KEIRA

OWEN

Growth & Sustainability

BRETT

CHARLIE

ITZEL
***NOAH**

(*Pictured above in a leadership role)

Staff & Partners

FIRST Wisconsin Staff

RENEE BECKER-BLAU

PRESIDENT OF FIRST WISCONSIN

As a student in FIRST, Renee Becker-Blau discovered her passion for community building, laying the foundation for a 20+ year journey in nonprofit management. Throughout this time, she actively volunteered in all FIRST programs, provided mentorship to over 22 teams, and immersed herself in the fields of youth development.

TREVOR CARTER

FTC PROGRAM MANAGER - EVENTS

In the last 15 years, Trevor Carter has become a prominent figure in Wisconsin's FIRST Tech Challenge community. As an alumni of the program, Trevor's extensive experience makes him an excellent fit for the role of FIRST Tech Challenge Program Manager- Events. He's committed to fostering a welcoming and inclusive environment for all.

GREG BILLETDUX

FRC PROGRAM MANAGER - TEAM SUPPORT

With over 20 years of experience as a participant, mentor, and volunteer in FIRST, Greg Billetdeaux became the FRC Program Manager - Team Support in April 2024. He specializes in data analysis, identifying strong communities that would benefit from starting a FIRST program, & guides mentors of new teams during their first season; helping them overcome challenges and connecting with the broader FIRST community.

FIRST Senior Mentors

JANE BLAU

Jane Blau has been a FIRST® Senior Mentor in Wisconsin since 2016. Her journey with FIRST® began in 1998 when her sons joined a FIRST® LEGO® League team, later advancing to a FIRST® Robotics Competition team. In her role, she supports teams by connecting them with resources, funding, training, and program information across all programs

EMMA SCHUFF

Emma Schuff has been a FIRST® Senior Mentor in Wisconsin since June 2018, supporting all programs with a focus on rural access, workshops, and advocacy training. Passionate about inclusivity, she works to ensure all students can participate and embrace the mission of FIRST.

From the Desk of the FIRST Wisconsin President

Dear FIRST Wisconsin Community,

As we conclude the **FIRST IN SHOW** season, I'm proud to reflect on a year of incredible growth, resilience, and collaboration in my role as President of FIRST Wisconsin. This year marked my first full season in this position, and it has been an honor to work alongside such passionate and dedicated individuals committed to providing life-changing robotics programs to Wisconsin's youth.

Highlights from the Year:

- **Unwavering Commitment to Excellence:** The energy and dedication of our Board, volunteers, and partners has been extraordinary. Together, we're building a foundation to enrich the lives of students across Wisconsin and prepare them for thriving careers.
- **Adapting for the Future:** We've begun transitioning responsibilities from the Board and volunteers to staff to ensure sustainable growth and greater focus on community support.
- **A Shared Vision for Success:** By aligning goals and fostering partnerships, FIRST Wisconsin is becoming a key driver of STEM workforce development in the state.

Building Bridges:

Addressing regional concerns and challenges has underscored the importance of open and active communication. Initiatives such as forming an Engagement Committee—special thanks to Austin Lee and Ryan Yohnk for getting it started—and introducing open office hours at both in-season and off-season events will foster trust and transparency, ensuring all voices in our community are valued. By taking these steps, we're not only addressing immediate concerns but also laying the groundwork for deeper collaboration and mutual understanding. These efforts reflect the kinds of lessons students learn through FIRST: the power of continuous dialogue, the resilience to fail and try again, and the strength of working together to achieve a shared vision.

A Call to Action:

I invite all members of the FIRST community to join us in shaping the future of FIRST Wisconsin.

During town-hall meetings and our open office hours this past year, these questions stood out: ***How can I help? How do I engage? What do you need?*** To answer that, we created a form to connect individuals with six key initiatives—offering a clear path to get involved and make a difference.

Whether you want to expand the organization or ensure your ideas are heard, we value your perspective. Scan the QR code and complete the form to connect with like-minded FIRST volunteers and mentors as we collaborate on the next steps for FIRST Wisconsin.

Your energy and collaboration drive our mission. Together, we can create a brighter future where every student—regardless of gender, race, socioeconomic status, or ability—has the opportunity to choose a career in STEM.

I look forward to building this future alongside you.

Renee Becker-Blau
President of FIRST Wisconsin

FIRST in the state of Wisconsin

Collaborative Leadership

FIRST® (For Inspiration and Recognition of Science and Technology) is a robotics community that prepares young people for the future through a suite of inclusive, team-based robotics programs for ages 4-18 (PreK-12) that can be facilitated in school or in structured afterschool programs.

An international not-for-profit organization (501(c)(3)) founded by accomplished inventor Dean Kamen in 1989, FIRST has a proven impact on STEM learning, interest, and skill-building well beyond high school. Alumni of FIRST programs gain access to exclusive scholarships, internships, and other opportunities that create connections and open pathways to a wide variety of careers.

FIRST programs in Wisconsin are managed by two dedicated organizations: Badger Bots & *FIRST* Wisconsin Robotics.

BadgerBots runs all *FIRST* LEGO League Challenge and *FIRST* LEGO League Explore tournaments and expos in Wisconsin and provides support for teams across the state, including coach and mentor training.

FIRST Wisconsin is a 501(c)(3) non profit organization dedicated to spreading the reach of the FIRST program throughout the state of Wisconsin.The organization is responsible for supporting the team and event experience for the FIRST Tech Challenge and FIRST Robotics Competition programs. Pursuit of this mission will provide students grades K-12 with opportunities to develop skills in STEM, business, teamwork, and real world problem solving.

FIRST Programs in WI

Badger Bots
BUILD • DEVELOP • CREATE • INSPIRE

FIRST® LEGO® League Divisions

FIRST combines the rigor of STEM learning with the fun and excitement of traditional sports and the inspiration that comes from community. Participants benefit from a suite of programs that have a proven impact on learning, interest, and skill-building inside and outside of the classroom.

FIRST LEGO League guides youth through STEM learning and exploration at an early age. From Discover to Explore and then to Challenge, students will understand the basics of STEM and apply their skills in an exciting competition while gaining productive learning habits, confidence, and teamwork skills along the way.

FIRST LEGO LEAGUE DISCOVER

AGES 4-6

GRADES PreK-1

FIRST LEGO LEAGUE DISCOVER

This playful introductory STEM program ignites children's natural curiosity and builds their habits of learning with hands-on activities in the classroom and at home using LEGO® DUPLO® bricks.

FIRST LEGO LEAGUE EXPLORE

AGES 6-10

GRADES 2-4

FIRST LEGO LEAGUE EXPLORE

Teams of students focus on the fundamentals of engineering as they explore real-world problems, learn to design and code, and create unique solutions made with LEGO bricks and powered by LEGO® Education SPIKE Essential or WeDo 2.0.

FIRST LEGO LEAGUE CHALLENGE

AGES 9-16*

GRADES 4-8

FIRST LEGO LEAGUE CHALLENGE

Teams of students engage in research, problem solving, coding, and engineering – building and programming a LEGO® SPIKE Prime or MINDSTORMS® robot that navigates the missions of a robot game. They also participate in the Innovation Project to identify and solve a relevant real-world problem.

*Ages vary by country

FIRST®— A Suite of Hands-On, STEM Learning Programs

As the world's leading youth-serving nonprofit advancing STEM (science, technology, engineering, and math) education, students from all walks of life have developed self-confidence in STEM and valuable, real-world skills through *FIRST* that open pathways to a better future. Through these team-based robotics challenges and backed by a global network of mentors, coaches, volunteers, alumni, and sponsors, *FIRST* helps young people discover a passion for STEM and become leaders and innovators in any industry.

Children can start their journey with ***FIRST***® LEGO® League and progress through ***FIRST***® Tech Challenge and ***FIRST***® Robotics Competition, or join any of our three programs based on age or grade level.

Grades 7-12 · Ages 12-18

It's Way More Than Building Robots

FIRST Tech Challenge students learn to think like engineers. Teams design, build, and program robots to compete in an alliance format against other teams.

Robots are built from a reusable platform, powered by Android technology, & coded usingJava based programming.

Grades 9-12 · Ages 14-18

An Exciting Sport Built Around STEM

FIRST Robotics Competition teams design, program, and build a robot starting with a standard kit of parts and common set of rules to play in a themed head-to-head challenge.

Teams also build a brand, develop community partnerships for support, and work to promote STEM in their local community.

Across both of these programs, participants and alumni have access to career discovery opportunities, networking, and the *FIRST* Scholarship Program.

At the heart of *FIRST* are its Core Values, which emphasize the contributions of others, friendly sportsmanship, teamwork, learning, and community involvement. These include *Gracious Professionalism*® (respect for others, being a good sport, and sharing what you learn) and *Coopertition*® (competing hard but also helping the other teams).

Learn more about ***FIRST*** Wisconsin and our suite of hands-on programs at firstinspireswi.org

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