



# Downingtown Area ROBOTICS

*Team Sab-BOT-age*

**FIRST LEGO® League** (Grades 4 & 5)

**VEX Robotics Competition** (Grades 6-12)

**FIRST Robotics Competition** (Grades 9-12)

# Your Community

*FIRST: For Inspiration and Recognition of Science and Technology*

**Join an organization dedicated to:**

“Inspiring young people to be science and technology **leaders**, by engaging them in exciting mentor-based programs that build science, engineering and technology **skills**, that inspire **innovation**, and that foster well-rounded life capabilities including **self-confidence**, **communications** and **leadership**.”

– *U.S. FIRST Robotics Mission*

# Your Community

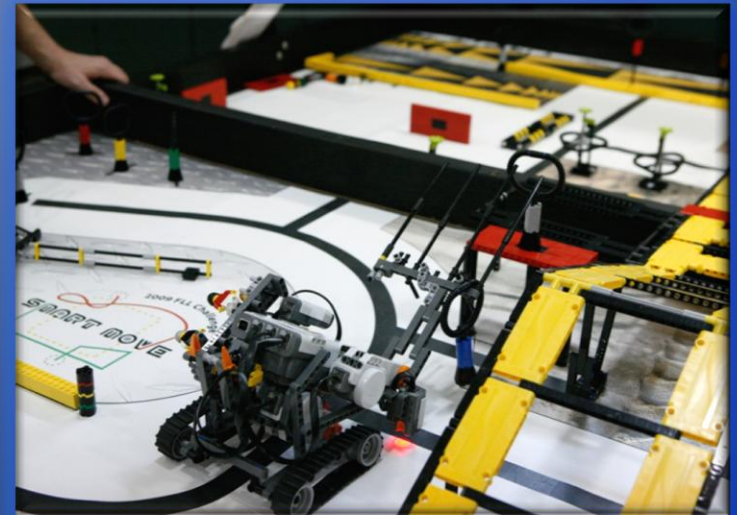
For Inspiration and Recognition of Science and Technology

## The FIRST & VEX Communities Include:

- 20,000 Teams in All 50 **States** and 56 **Countries**
- Over 200,000 **Students**
- 57,000 Adult **Mentors**
- 33,000 Event **Volunteers**

# THE FLL COMPETITION

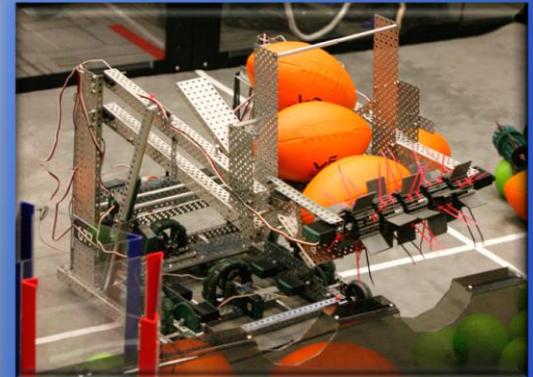
- Each year, *FIRST* announces a new **Challenge**
  - The Challenge is related to a **Real-World Issue**
  - It includes a **Learning Project** and a **Robot Game**
- As students participate they...
  - **Enjoy** hands-on STEM activities
  - **Discover** how STEM can help solve world problems
  - **Learn** basic building, programming & research skills
  - **Apply** basic STEM principles to their own inventions
  - **Get on the Fast Track** to STEM education & future robotics programs





# THE VEX COMPETITION

- Each year, VEX designs and announces a new competition
- Student teams then get the season to...
  - **Experience** imagining, creating & competing with their own ideas
  - **Practice** cooperation, sportsmanship, problem solving & basic engineering documentation
  - **Examine** engineering principles with minimal assembly
  - **Apply** classroom principles to construct real devices
  - **Experiment** with robot designs & tactics
  - **Learn** basic mechanical skills by building the robot



# THE FRC COMPETITION

- Each year, *FIRST* designs and announces a new game
- Student teams then have 6 weeks to...
  - **Employ** teamwork, leadership, time management, sportsmanship & problem solving
  - **Strategize** how their robot will compete, technically & tactically
  - **Prototype, Test & Analyze** concepts, designs & tactics
  - **Design** the robot in 3-D CAD
  - **Program** the robot, controller & support functions
  - **Learn Mechanical & Electrical Skills** from welding to vacuum forming and wiring to soldering
  - **Apply Their Work** by testing the robot & training the drivers





# Your Team

## *Sab-BOT-age*



- Founded in **2005** with 12 Students on the FRC Team
- Now includes:
  - 2 FLL Teams with 14 Students
  - 9 VEX Teams with 50 Students, including 1 all-girl team
  - 1 FRC Team with 35 Students
- Provides **training & mentoring** to area teams
- Exposes and **inspires youth** in science and technology through community and sponsor events
- Receives numerous technical honors like the *Think Award*, *Innovation in Control & Quality Design*
- Perennial competition **champions** and finalists
- Wins sportsmanship awards like *Most Spirited Team* and *Gracious Professionals*







# Developing Future Technology Professionals

- Learn technical & scientific skills
  - **Analyze & apply** physical principals
  - Develop **real-world** mechanical, electrical & programming skills
  - Learn to enjoy, understand & **appreciate STEM** from an early age!
- Develop cooperative & professional abilities
  - Effective **communication, deadline management & problem solving**
  - **Contribute to & lead** teams and projects
  - Practice **teamwork & sportsmanship**
- All graduates attend **university**, mostly for science, engineering, computer science, or business
- Graduates have gone on to Harvard, Penn, Cornell, Carnegie Mellon and the U.S. Coast Guard Academy
- Sponsors have directly benefited by employing graduates as **interns**



# What You Can Do

- **Sponsorship:** It takes \$25-\$45K per year to **help make the team great!** This comes chiefly from local technology companies.
- **Mentors:** Any interested employee or family member is **welcome to mentor** the team!



# What We Do For You

- ◆ **Exposure:** To thousands of current and future scientists, engineers, and technologists
- ◆ **Future Employees and Interns:** We develop students into future technical professionals, several of whom have interned at sponsors' companies