

Explorer Post 1010  
Rockville Maryland



# Engineering Exploring Program

Bob Ekman, Advisor  
September 2018

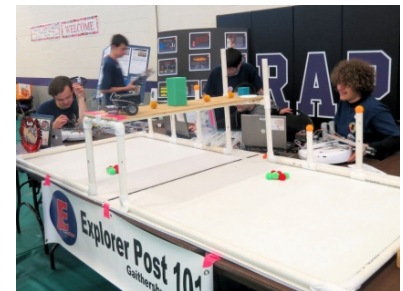
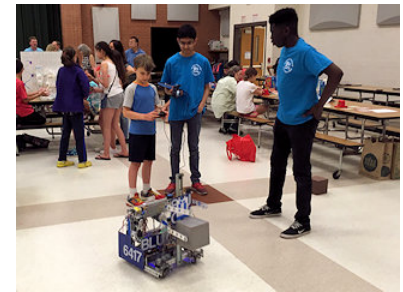
# Who We Are

- Enthusiastic students from local high schools, interested in engineering
- Sponsored by the Rockville Science Center, and supported by Johns Hopkins University
- Organized under national Learning-for-Life Exploring Program



# What We Do (Discover Your Future)

- Compete in international robotics, rocketry and drone programs
- Everyone on a team
- Teen leadership responsibilities
- Local field trips and presentations
- Community service opportunities
- Adult support
- And we have a lot of fun!



# We Fly Them High!

- *Team America Rocketry Challenge*
  - Design/build model rockets to meet a specific altitude, duration, design, and recovery
  - Carry eggs and altimeter
  - Launch in MD and VA
  - Two teams completed in 2018 both invited to national



- *Unmanned Aircraft Systems (UAS)*
  - Build and fly a quadcopter to complete a detailed mission
  - 2<sup>nd</sup> semester activity
  - 2018 was our third year
  - Invited to national competition

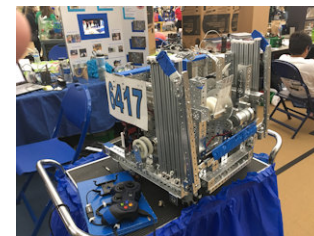




# We Kick Bots!

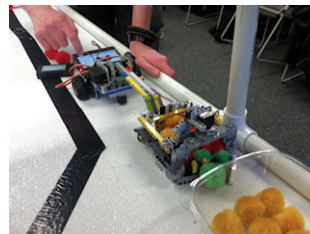
- *FIRST Tech Challenge*

- One team in 2017
- High rank in local tournaments, advanced to state and world championship



- *Botball Educational Robotics*

- Eighteen years participation
- One teams in DC region tournaments
- One team participated in global competition in California
- Regional and global awards over many years



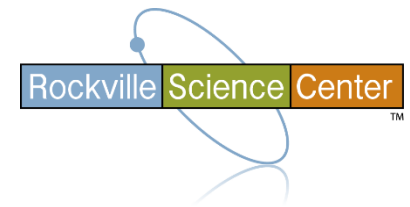
# Operations

- Membership 2018
  - 40 high school girls and boys
  - From 12 different schools
  - 90% graduate to science/engineering higher education degree programs
- Meetings
  - Wednesday, 6:00pm – 9:00pm, everyone
  - Monday, 6:00pm – 9:00pm, workshops
  - Saturday: launches, competitions
  - Annual picnic, teamwork events
  - Exhibits, school visits, SSL opportunities
  - Local tours, summer overnight trips



# Rockville Science Center Sponsorship

- Explorer Post 1010 in twenty first year
  - *Eighteen years at Lockheed Martin*
- Rockville Science Center Support
  - *Volunteers, mentors, resources, outreach*
  - *Makerspace at Rockville Library*
- Johns Hopkins University Support
  - *Facility use, safe and secure location*
- Funding
  - *Dues (\$120 annual)*
  - *Grants, contributions*
  - *Fund raising*



# Exploring (Learning for Life)

- National organization

- Strives to be the foremost co-educational youth program for character and career development
- <http://www.learning-for-life.org/>



- Exploring is work site career program

- Provides high school teens with environment, resources, and relationships they need to learn and grow
- Aviation, Business, Communications, Engineering, Fire Service, Health, Law Enforcement, Law & Government, Science
- 300 offices through local Boy Scout Councils
- 30 Posts in DC council, 900 students





# Contact

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