

Explorer Post 1010  
Rockville Maryland



# Engineering Exploring Program

Bob Ekman, Advisor  
September 2020

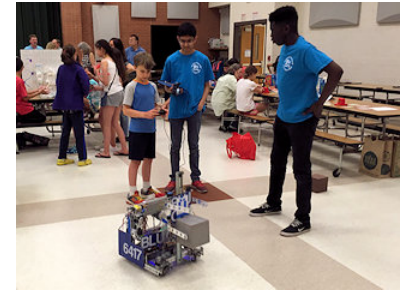
# Who We Are

- Enthusiastic students from local high schools, interested in engineering
- Sponsored by the Rockville Science Center
- Organized under national Exploring Program, Learning for Life, Boy Scouts of America Affiliate



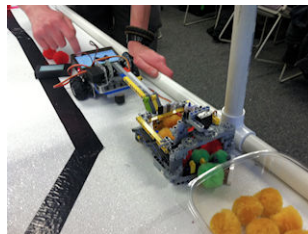
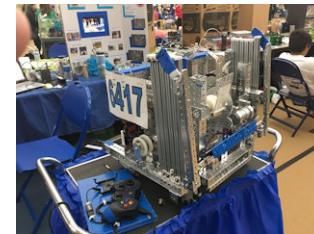
# What We Do (Discover Your Future)

- 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 Kick Bots!

- *FIRST Tech Challenge*
  - One team in 2018/2019
  - Awards in local tournaments, state finals
  - New challenge for 2020/21
- *Botball Educational Robotics*
  - Twenty years participation
  - Compete in DC region tournaments, participate in global competition
  - Regional and global awards over many years
  - 2020 challenge extended to 2021





# We Fly Them High!

## ■ *The American Rocketry Challenge*

- Design/build model rockets to meet a specific altitude, duration, design, and recovery
- Carry eggs and altimeter
- Launch in MD and VA
- Best teams in Maryland in 2019
- 2020 challenge extended to 2021



## ■ *Unmanned Aircraft Systems (UAS)*

- Build and fly a quadcopter to complete a detailed mission
- 2019 went to national competition
- 2020 challenge extended to 2021



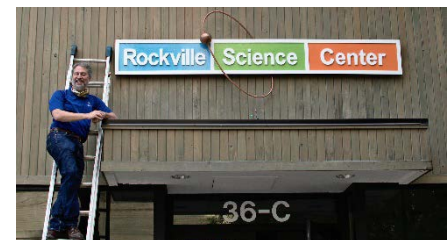
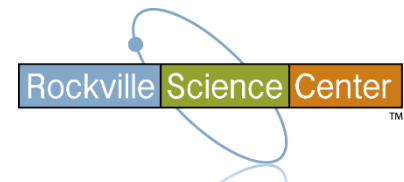
# Operations

- Membership 2020
  - 40 high school girls and boys
  - From many different schools
  - 90% graduate to science/engineering higher education degree programs
- Meetings
  - Wednesday, on-line 7pm – 9pm, everyone
  - Varied in-person work sessions
  - Saturday/Sunday launches, competitions
  - Annual picnic, teamwork events
  - Exhibits, school visits, SSL opportunities
  - Local tours, summer overnight trips



# Rockville Science Center Sponsorship

- Explorer Post 1010 in 23<sup>rd</sup> year
  - *Seventeen years at Lockheed Martin*
  - *Five years at Johns Hopkins*
- Rockville Science Center Support
  - *Volunteers, mentors, resources, outreach*
  - *Storefront at Rockville Town Square*
- Rockville Memorial Library
  - *Facility use, safe and secure location*
- Funding
  - *Dues (\$200 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
- 30 Posts in DC area council, 900 students





# Contact

- Advisor: Bob Ekman
  - Rockville Science Center  
at Rockville Memorial Library and RSC Storefront
  - 21 and 36C Maryland Ave, Rockville, MD 20850
  - 301-512-1278 (mobile)
  - [info@post1010.org](mailto:info@post1010.org)
  - [bob.ekman@att.net](mailto:bob.ekman@att.net)
- Web Page: [www.post1010.org](http://www.post1010.org)
- Facebook: Explorer Post 1010
- Google Calendar: <http://www.post1010.org/calendar.html>

