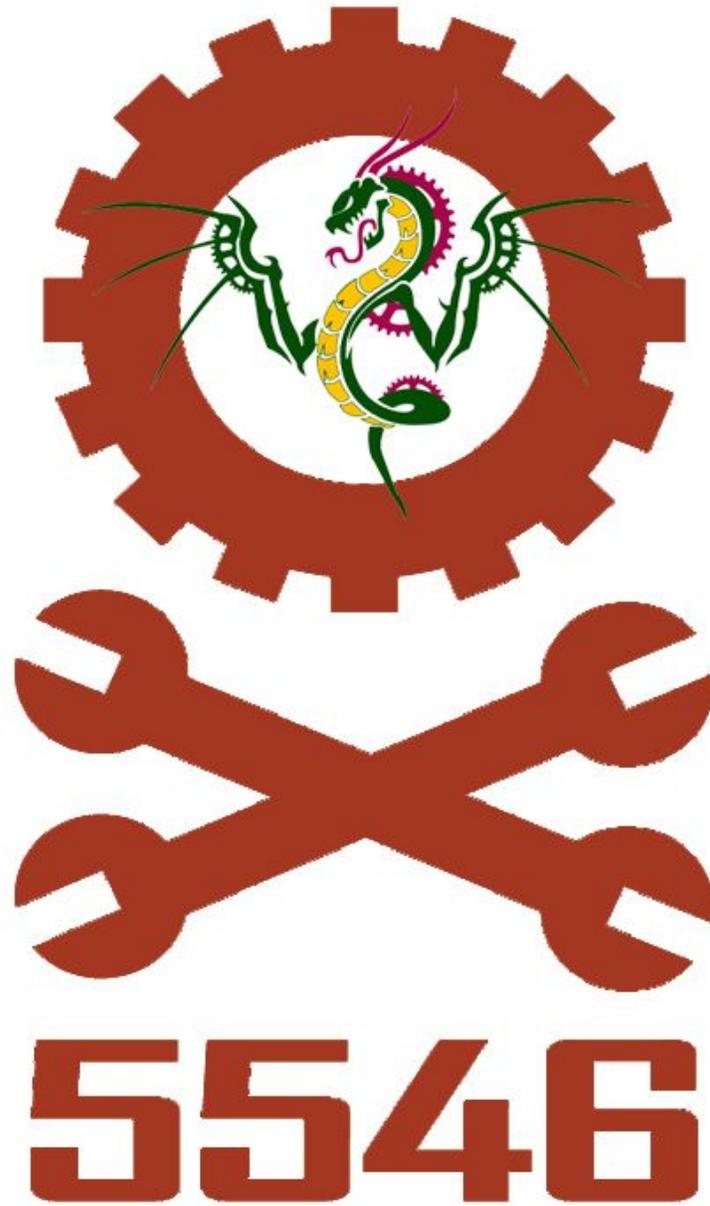


# ARGS Robotics Team (ART) Manual



**\*\*Thank you to Pitt Pirates 2642 for the model for this manual!\*\***



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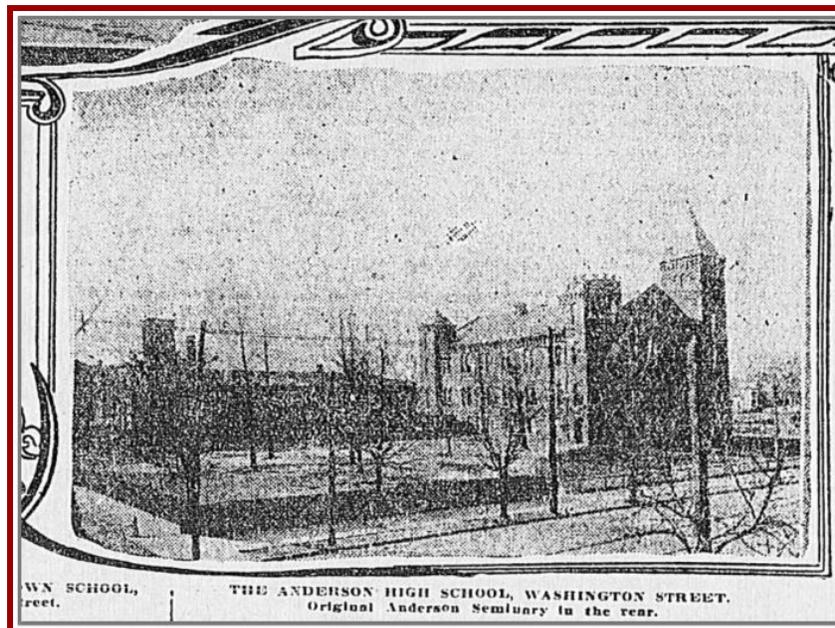
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# ARGS Robotics Team (ART) Mission

The mission of the Appomattox Regional Governor's School for the Arts and Technology (ARGS) Robotics Team's mission combines the missions of ARGS, the ARGS Technology Department, and FIRST Robotics, as well as the passion of our members and mentors.

**The ARGS Robotics Team (ART) is committed to making positive change in our community, our state, and our nation by reaching out to underserved communities to spark interest and passion in science, technology, engineering, and mathematics (STEM). We do this by using robotics and the principles of FIRST ROBOTICS to give students creative, hands-on, research-based engineering projects in applied mathematics, science, design, and research.**

## Introduction



*Photo Credit: Richmond Times Dispatch, Sunday, November 26, 1911*

ARGS is located in Petersburg, Virginia, in the historic Petersburg High School, built in 1918. The high school is on land which has been used for public education since before the Civil War. In fact, one of the nation's very first public schools, Anderson Seminary, was located on this same site.

# ART@ARGS



*Photo Credit: KBS Website*

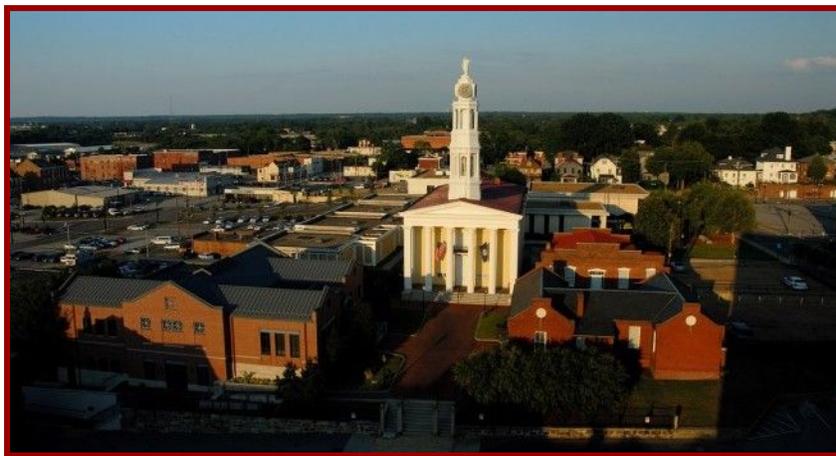
ART is based at the Appomattox Regional Governor's School for the Arts and Technology (ARGS). ARGS is one of only three full-time public Governor's Schools in the Commonwealth of Virginia, and one of the few official STEAM (science, technology, engineering, art, and mathematics) specialty high schools in the United States. A small school of less than 400 students, ARGS admits students from 14 different south central Virginia cities and counties who have been identified as gifted in either the arts (literary, visual, vocal, theater, or dance) or technology (engineering or computer science). Students must be adjudicated by experts in their field of interest for entry to the school. Students come from all around south central Virginia - from the city of Richmond, to Surry County to the east, Amelia County to the west, and Sussex County to the south. Some students on the robotics team travel almost two hours to school each way. This distance can become a challenge when the team has to meet, but somehow, these students (and parents) find a way!



The ARGS student body is an extremely diverse melting pot. Students on the robotics team come from every socio-economic, ethnic, and cultural background - from cities, farms, and suburbs. Because of this unique blend of students, ARGS is a special place, and the ARGS Robotics Team is special too. The team leadership is made up of not just Technology students, but from some of the arts focus areas as well.

ARGS has a long history with FIRST Robotics. Our team was first founded in 2010 as team number 404, but the team died. However, there was always student interest in reviving the team. In 2014, the team was reborn as the ARGS Robotics Team (ART), team number 5546.

## Petersburg, Virginia



*Photo Credit: petersburgarea.org*

Even though our students come from all over south central Virginia, we feel a special commitment to the city of Petersburg. According to 2016 US Census data, the city of Petersburg is 78% African-American. It has a median household income of \$32,169, and a median per capita income of \$20,464, numbers which lag far behind the overall income statistics for the Commonwealth of Virginia. Over 25% of the Petersburg population was in poverty in 2016, and 16.6% of residents have a bachelor's degree or higher. These statistics, along with the need to draw more underrepresented minorities into STEM, have helped lead ART to its mission of encouraging young students in Petersburg to pursue engineering.

## STEM Crisis

With the decrease in the number of students from the United States studying STEM-related subjects, some have predicted there will be a shortage of qualified Americans to fill the available STEM jobs within the next ten years (Joint Economic Committee Chairman's Staff, Senator Bob Casey, Chairman, 2012). The ongoing gender and ethnic disparity in STEM in the United States has led to a plethora of research, theories, and information about how to narrow

this gap. When it comes to gender, recent statistics suggest the United States is falling behind other nations in producing female STEM professionals (National Science Foundation, 2014). Despite little difference in mathematics achievement between United States men and women, high-achieving females in the United States do not choose to enter STEM fields in the same numbers as high-achieving females from other nations (Jaffer & Mourshed, 2013). If the United States is to continue to compete in the fields of engineering and technology, it is vital people from underrepresented minorities begin to participate more in STEM fields.

## Team Membership

*The ARGS Robotics Team is a team. As such, it is crucial all of the team members work together to meet the goals and objectives of the team. There are certain requirements which all students must meet to be part of this team. There are standards of conduct which all students must meet to be part of this team.*

## Qualifications

To be a member in good standing, a student must meet the following criteria.

1. Team members must have completed all applications and documents.
2. Students must have a working email address and check it regularly.
3. All dues must be paid in full.
4. Team members must maintain good academic credentials to hold their position. Students must hold a “C” average or better in all classes. A captain or sub-team captain may not have more than two classes with a “C” average.
  - a. A student who does not meet this requirement will be placed on probation. Students have 30 days to improve their grade point average or they will be suspended. Any student needing assistance in their class work is encouraged to contact the coaches for assistance.

## Forms and Dues

1. All students must complete the contract and medical form.
2. All of the data must be complete and accurate.
3. All dues must be paid in full. Due dates TBA.
4. Dues typically include the following:
5. Membership \$35 (payable at the beginning of season)
6. Travel \$125 x 2 (Two District Competitions – Payable mid season)

## Attendance

Attendance at all meetings is recorded. Students do not have to attend every meeting but are strongly encouraged to do so. Students must attend 50% of the lunch meetings at ARGS, and 80% of the sub-team meetings for which they signed up. If a student must miss a meeting, they need to contact a mentor or captain and let them know. Students only receive credit for meetings they have attended.

## Homework

Students will be assigned some small tasks to be completed outside the meeting time. Students need to be prepared to conduct some robotics activities outside the normal meeting time. Homework must be completed correctly and submitted by the due date to receive credit. Homework assignments will be listed on the web page. There are no extensions for the deadlines.

## Participation

Robotics is an extracurricular activity which requires many hours beyond the normal school day. FIRST requires a significant time commitment. Every team member is expected to participate in team work sessions, meetings, events and activities. If students find they have conflicts with other sports or academic programs, they need to communicate with the mentors. Intermittent conflicts can be handled by communicating beforehand. It is the student's responsibility to coordinate and schedule their activities and commitments so they can meet their obligations.

Most of the routine activities are described below.

## Team meetings

Meeting schedules will vary depending on the time of year. In the fall, the team will have 3-4 regular meetings per month. During the build season the team will meet almost every day during the 6 week build season. In the spring and summer, meetings will be infrequent.

Meeting schedules will be posted on the website calendar and reminders sent by email. It is each member's responsibility to keep up with the meeting schedule.

## Events/Outreach

During the pre-season, students may be asked to participate in demonstrations, fundraisers, and other competitions. Team members may ask to be excused from a pre-season or off-season event with the permission of the mentors.

All team members are expected to participate in outreach efforts. The outreach efforts are one of the most important things we do as a team. This helps us to spread the word about FIRST, recruit new members, assist other teams and develop new and important contacts in the community. Some outreach events include:

- **Robot Demonstrations**  
Presentations to schools, corporations, sponsors, and civic groups
- **STEM Workshops**  
STEM workshops at the local library or school for younger students to increase interest in robotics.

Events and Outreach will be broadcast by website and email. In many cases an event may only require a small group of students. Students will need to sign up in advance for these events. Be

sure to contact the mentors and/or sub-team captain if you want to participate in a specific event. It is the student's responsibility to contact the mentors and/or sub-team captain to participate in specific events.

## Conduct

ART is a unique team of students and adults. We rely on each other for the success of the group. Everyone is expected to bring the very best of their abilities to the group. The FRC competition is very expensive and time consuming. Many people work very hard to make this competition a success both as participants and sponsors. It is expected all involved will act as motivated participants with the highest regard for the safety and well being of others. All participants are expected to demonstrate honesty and integrity in thought and deed.

### Demonstrate Good Judgment and Behavior

Each team member is an ambassador for our team. Each team member should be a role model for others to emulate and respect. It only takes one bad decision to make the whole team look bad. Team members are expected to make good behavior choices at all times.

### Willingness to Commit to a Project

Starting a project and following it through to the end is critical to team performance. Team members need to dedicate themselves and not get side tracked or discouraged. Your word is very important. Don't take on responsibility you can't fulfill, and ask for help if you are having problems with a project. All assignments (tasks and projects) are important. Timeliness, quality, and integrity are essential because every future task builds on the current ones.

### Ability to work independently and as a Team member

Being able to be a team player and doing what is needed for the team is an asset to all. However, some activities require one to work independently with little or no direction. Students need to be prepared to work in both arenas.

### Interest in Science, Technology, Robotics and Related Fields

It is likely many team members will have genuine interest and an overall educational goal related to these fields of study. However, ART needs students with a broad range of interests and skills. Thus, the most important characteristic is a willingness to learn new skills and then to apply those skills in a dedicated fashion to key areas of the team.

### ART Rules for Success

Even if a person is acting with honesty and integrity while conducting team and personal activities, they may not succeed. To be successful, one must have a plan. ART has three rules for planning success.

1. **Have a plan.** It doesn't have to be great, but know what you want to do and how.
2. **Execute your plan.** It's great to have a plan, but if you never use it, it is of no value.

3. **Do your homework.** Be prepared. Do your research and learning in advance so you can be ready to execute your strategy or act on rule four.

*There is a rule four, just in case.*

4. **Be flexible.** If you've done your homework you should be prepared and ready. If things don't work like you thought, that's ok. Be prepared to adjust the plan to best suit the needs of the team.

## Discipline

ART is a voluntary activity for students and it should not be necessary to discipline students. In most cases mentors will caution or warn a student if their behavior is inappropriate. However, in some cases, students will be disciplined. If a student must be taken aside or redirected for serious infractions, the student will be counseled. The event will be documented in a short description which includes the infraction and the action items. Action items will be assigned by a coach. This document will be signed by a mentor, a coach and the student. A copy will be kept with the team records and one will be sent to the student's parent. Any student who receives two disciplinary actions will be dismissed from the team.

## Parent Expectations

The parents of our student members are an important part of ART. This team could not exist without their help. There are some expectations for the parents of ART members.

- Complete and submit documents and dues on time.
- Transport team members to and from designated location on time.
- Join and Support the ART Booster Club.
- Assist students in fundraising activities.
- Attend parent meetings.
- Provide support in all aspects of team involvement.
- Provide snacks, meals and drinks for the team.
- Parents may be called to pick up their student at an event or meeting if the student's behavior does not meet conduct guidelines as described in the Conduct section of this manual.

## Safety

*The safety and well being of all FRC participants is paramount. It is imperative all students, volunteers and mentors make safety a priority in each activity. This section describes the culture, methods, and procedures we will use to enforce and maintain a safe environment for all participants.*

### Safety Culture (Taken from the FRC Safety Manual)

Instilling a culture of safety is a value which every individual in the FIRST® community must embrace as we pursue FIRST's mission and vision. FIRST Robotics Competition (FRC) has

adopted safety as a core value and has established the framework for safety leadership in all aspects of the program.

FIRST believes the teams which take the lead in developing safety programs and policies have a positive and lasting impact on each team member, Mentor, their communities, and their present and future workplaces. FIRST recognizes the teams who demonstrate safety throughout their programs and are truly committed to developing and nurturing a safety culture

## Safety Rules

This section describes the basic rules governing activities in the ART workshop. Every student must be familiar with these rules. Failure to obey these rules can result in expulsion from the worksite or the program.

### General Practices

1. **General Shop Access.** General shop access is available to all participants who need to work on materials for First Robotics. A schedule of meeting hours will be posted. Gracious Professionalism must be displayed at all times. This means treating people and facilities with respect.
2. **After Hours Access.** Shop access is available for unscheduled or special meetings. Entry to the shop must be coordinated with a team mentor. An adult mentor must be present.
3. **Personnel.** There must be at least two persons in the shop at any time. During construction, there must be at least one Adult mentor in the shop.
4. **Equipment.** Equipment belonging to Team 5546 may be used in the shop area as long as rule three (above) is observed. No equipment belonging to ARGS is to be used without permission or training by personnel familiar with the equipment.
5. **Safety and/or Rule Violations.** The use of the Shop is a privilege. **VIOLATIONS OF THE SAFETY AND SHOP RULES WILL NOT BE TOLERATED.**
  - i. First Violation – Verbal warning
  - ii. Second Violation – Student will be sent home
6. **Housekeeping.** Clean up machines and the work area when you are finished. A dirty shop is unsafe and hazardous to work in.

### Safety Rules

1. **Everyone must wear safety glasses in the shop.** You must wear safety glasses in the work areas even if you're not working. Safety glasses will be made available to all participants.
2. **Never Work Alone.** There must be two persons in the shop at all times. There must be an adult mentor present for any work activities.
3. **Don't Work in the shop if you're tired and/or using medication which may causes drowsiness.** You cannot use shop tools under those conditions.
4. **Obey the Shop Rules at All Times.** Be aware of the rules, they are posted.
5. **If You Don't Know How to Do Something, Ask!**
6. **Zero Tolerance for Horseplay.** Fooling around in the shop can be very dangerous and is grounds for immediate dismissal from the shop.

7. **Check your hair, clothes and jewelry.** Before you enter the shop, check the following:
  - a. If you have long hair, tie it up.
  - b. No loose or hanging clothing.
  - c. Remove jewelry. It can get caught in equipment.
  - d. No Gloves! Only use gloves for material handling.
8. **Wear appropriate shoes.** No open toe sandals. Wear shoes that give sure footing and protect your feet. Leather work shoes are recommended.
9. **Prohibited electronic devices.** Digital music devices, cell phones and other such devices shall not be used in the shop. Cell phones and portable music devices must be turned off or put away while working in the shop.

**Be safe, use common sense and have fun!**

## ARGS Robotics Team Leadership Roles

*These roles are preliminary, based on lessons learned over the past few years. The team structure is meant to increase team member involvement in all aspects of the season. The team captain(s) may have different ideas, which is fine, as long as all duties are fulfilled and all team members who wish to be involved get a chance to be involved.*

Part of FIRST's mission is to help create future industry leaders, using robotics as a vehicle. Robotics is challenging, frustrating, fun, and exciting all at the same time. Even if you are not planning to become a roboticist or an engineer, the skills you learn in robotics will help you in whatever career you choose.

Being a team or sub-team captain is a serious, but rewarding, responsibility. Team and sub-team captains are expected to (1) fulfill the listed responsibilities; (2) attend meetings; (3) attend competitions (unless there are extenuating circumstances); and (4) pay their team dues. If a captain is unable to attend an event, they must let Mr. Salas and Mrs. Crowder know, and have a contingency plan in place to make sure responsibilities are fulfilled.

Please read the list below carefully. I know it may seem daunting, but remember, you will not be alone. One person can not know, or do, everything, so there will - and should be - a lot of sub-team coordination. Plus, parents, mentors, and other team members will be there to help support you whenever you need it.

- [Team Captain\(s\)](#)
- [Build Sub-Team Captain](#)
- [Business Sub-Team Captain](#)
- [PR/Outreach Sub-Team Captain](#)
- [Programming Sub-Team Captain](#)
- [Safety Sub-Team Captain](#)

- [Scouting Sub-Team Captain](#)

### **Team Captain(s)**

- Overall team and sub-team strategy and management. This is a HUGE job, which is why co-captains may be a better option.
  - Captain and sub-team Captain meetings twice a month
  - Scheduling whole-team meetings
- Updating the team calendar with meetings and competitions
- Report progress to school mentors (Mr. Salas and Mrs. Crowder)
- Running Drive Team Tryouts
  - Would like to have a main drive team and an alternate drive team
- Serve as a liaison between the team and school mentors

### **Build Sub-Team Captain**

- Work with adult mentor(s) on overall strategy for
  - Develop and implement team training for the pre-season
  - Design and production during build season
  - Necessary improvements, repairs, and modifications during competition season
- Research other teams' strategies on designing and building robots.
- Assign leads for Design and Production
- Work with the scouting team to analyze the game to optimize robot design
- Documenting all design ideas, files, blueprints, and bills of materials
- Documenting the build process.
- Liaison with local contacts and/or businesses who have offered to machine our designs (e.g., Makerspace in Richmond, VSU, CTC)
- Team [Cost Accounting Worksheet](#)
- Team [Robot Lock-Up Form](#)
- Updating the team calendar with sub-team meeting and sub-team events.
- Report status of sub-team in Captain meetings

### **Business Sub-Team Captain**

- Work with adult mentor(s) on overall strategy for
  - Fundraising
  - Business plan
- Research other teams' strategies for fundraising and business plans
- Assign leads for Fundraising and Business plan
- Overall management of Fundraising
- Business Plan
- Grants calendar and applications
- Documentation of contacts and donations
- Communication with past and potential donors
- Updating the team calendar with sub-team meetings and sub-team events.

- Report to and coordinate with the ART Booster Club
- Report status of sub-team in Captain meetings

### **PR/Outreach Sub-Team Captain**

- Work with adult mentor(s) on overall strategy for
  - PR/outreach
  - Spirit
  - Recruitment of team members and team mentors
- Assign leads for PR/outreach, Spirit, and Recruitment
- Research other teams' strategies on PR/outreach, spirit, and recruitment
- Documenting all PR/outreach, spirit, and recruitment events
- Chairman's Award
- Maintenance of team member directory/map.
- Updating all social media
- Scheduling and arranging outreach events
- Liaison with local news media
- Report status of sub-team in Captain meetings

### **Programming Sub-Team Captain**

- Work with adult mentor(s) on overall strategy for
  - Develop and implement team training for the pre-season
  - Programming and testing during build season
  - Necessary improvements, repairs, and modifications during competition season
- Research other teams' strategies on programming robots.
- Work with the scouting team to analyze the game to optimize programming
- Documenting and backing up all code.
- Maintaining and updating the team website
- Updating the team calendar with sub-team meeting and sub-team events.
- Report status of sub-team in Captain meetings

### **Safety Sub-Team Captain**

- Work with adult mentor(s) on overall strategy to create and maintain a team culture of safety.
- Create benchmarks for team safety training
- Educate all team members on the importance of safety and safety procedures
  - In the workshop
  - With the robot
  - In the pit at competitions
- Document all team safety training and education
- Updating the team calendar with sub-team meetings and sub-team events
- Maintenance of all safety equipment and documentation
- Annual Safety Animation Video

### Scouting Sub-Team Captain

- Work with adult mentor(s) on overall strategy for
  - Data collection
  - Data analysis.
- Study and understand the game to optimize our robot design.
- Research other teams' strategies on scouting and data analysis
- Assign leads for Data Collection and Data Analysis
- Develop a system (could be computer-based or on paper!) for the team to collect relevant data on other teams before, during, and after competitions.
- Work with team members to organize collection of data, including competition data and pit scouting.
- Updating the team calendar with sub-team meetings and sub-team events
- Analyze data to optimize team strategy during competitions.
- Report status of sub-team in Captain meetings

## Funding and Financials

Team funding comes from three sources: major sponsors, other sponsors, team fundraisers and team member contributions. Major sponsors supply the majority of the funds used by the team. Major sponsors are solicited typically through the Business Team.

Other sponsors are companies, groups, or individuals who contribute funds, supplies, or services to our team. They are solicited through team members. Each team member is encouraged to solicit at least one such sponsor.

### Team Dues

Team member dues are funds provided by team members to support the cost of their participation on the team. This small fee covers the cost of team shirts. However, if financial difficulties are preventing a team member from paying their dues, he/she should consult with a mentor or member of the ART Booster Club.

***No student will be denied membership due to lack of funds.***

## Annual Budget

Participation in the FIRST Robotics Competition is expensive. Below are some examples of estimated budget line items:

Initial Registration (entitles team to compete at two district events)	5000
Chesapeake District Championship (Virginia or Maryland) Registration	4000
World Championship (Detroit, Michigan) Registration	5000
Playing field construction	500-1000
Robot construction	2000-4000
Travel to two district events	300/member
Travel to district championship	300/member
Travel to world championship	500/member
Food	150/member
Team items (e.g., banners, giveaways, etc.)	1500
Miscellaneous	2000

**This is a very expensive endeavor. This is why it is so important for team members to fundraise and help obtain sponsors.**

## Fundraising

Fundraising is vital to maintain the ART budget. Students are expected to help raise funds for the team. ART is supported by student dues, corporate and civic sponsors, sales or other fundraising activities (carwash, bake sale, auction, etc.) These funds are used to cover registration fees, outreach expenses and robot parts. Participation in fundraising includes presentations to corporate or civic organizations, assisting in fundraising programs for charities, and direct sales of products to benefit the team. The team is always looking for new ways to raise money. Please contact a mentor or the Business team sub-captain if you have new ideas on fundraising.

# Sample Fundraising Letter



Appomattox Robotics Team Booster Club  
13310 Thornridge Lane  
Midlothian, Virginia 23112  
EIN: 81-2571365

April 2, 2018

The **Appomattox Robotics Team Booster Club** is proud to support our students and honor the hard work they do. We invite you to support your local community by making a donation. We depend on the generosity of the surrounding community to provide the best opportunities for our children in light of drastic cuts to education budgets. We are looking for Corporate Sponsors to continue with **FIRST® Robotics Competitions** as well as our **Community Outreach** efforts.

*The mission of FIRST® is to inspire 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, communication, and leadership. ([FirstInspires](#)).*

This year our team is going to start its fifth year of competition and community outreach. Over the past four years of competition, our team has been to the World Championships three times. This year we need to raise approximately \$40,000 to allow us to prepare for the robotics season and have the ability to increase our Community Outreach efforts.

A donation of a \$1,000 or more will provide you the ability to have your company's logo on our robot and banners during the robotics season and at all of our public events. Any help monetarily or with items needed for our team will assist us. Only with your help can we provide the level of support our students and community need and deserve. Thank you for considering a donation to this very worthy cause. For questions or further information, please contact [Daniel Harker \(President, ART Booster Club at \[booster.president@argsrobotics.com\]\(mailto:booster.president@argsrobotics.com\)\)](#).

*All donations are tax-deductible to the extent allowed by law. Appomattox Robotics Booster Club is exempt from federal taxes under section 501(c)(3) of the Internal Revenue Code as a member of Parent Booster USA's (PBUSA) group exemption #5271. In accordance with IRS rules and regulations, donors are advised to verify an organization's 501(c)(3) tax exempt status.*

Sincerely,  
Student Members of the Appomattox Robotics Team (ART)  
Appomattox Regional Governor's School for the Arts and Technology



Appomattox Robotics Team Booster Club  
13310 Thornridge Lane  
Midlothian, Virginia 23112  
EIN: 81-2571365

## Cash/In-Kind Donation Form

Yes! We want to help the Appomattox Robotics Team Booster Club.

**Date:** \_\_\_\_\_

**Cash Donation:** \$ \_\_\_\_\_

**In-Kind Donation:** Please describe your donation (including fair market value):

\_\_\_\_\_

**Please PRINT clearly and list your name(s) as you would like to be recognized on (website, program, handout, etc.):**

Company/Organization Name: \_\_\_\_\_

Contact Name(s): \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Contact information is needed to send a tax receipt for donations. If you do not receive a response from us within 30 days, please e-mail [booster.president@argsrobotics.com](mailto:booster.president@argsrobotics.com) so we can verify your donation was processed.

**You may give this form to a team representative, or mail this form to:**

Daniel Harker, President  
Appomattox Robotics Booster Club  
13310 Thornridge Lane  
Midlothian, Virginia 23112

***Thank you for your support!***

# Travel

ART travels a great deal to attend competitions, outreach events, fundraisers, training and other activities. To be eligible to travel on team activities, a student must be a member in good standing as described in the Conduct section. Robotics competitions are considered school field trips, so students must have turned in all of their medical forms to ARGS in order to attend events. Students and parents must also provide written permission to attend season events.

Safety is always a major concern. Except for short, local trips, students will ride with mentors and/or parents. Students must wear seatbelts and stay with their assigned groups. All drivers for long trips must be approved by the mentors and all students will have to have written permission to ride with mentors who are not their parents.

Each year we try to attend at least two district events in the Virginia, Washington, DC, and/or Maryland, and we always hope for a slot at the District and the World Championships in Detroit, Michigan. Schedules at each of these events may vary based on travel distance and hotel arrangements. The mentors will provide schedules and information before all travel.

## Hotels

When we travel we often stay at a hotel for several nights. Students will be organized into room groups of either three or four students, depending on quantity of students and room availability. Students may be allowed to select roommates of their choice. There are no co-ed rooms; rooms are either male or female. Each room will have a mentor or parent assigned to monitor and coordinate activities. This includes room inspections. Often there is free time in the hotel to get snacks, play in the game room or swim. If there is a pool, a parent or mentor must be present. Appropriate attire is required. Please check with a mentor if there are any questions.

## Competitions

We try to attend district competitions which are fairly close to home. Most of our typical destinations are a 3-5 hour drive. Prior to our arrival, all students will be given a schedule which will outline their responsibilities every hour of the day. All students are expected to follow this schedule as closely as possible. This should be kept with them at all times. This is a typical schedule for a regional competition.

- **Thursday:** Thursday night, a small group of students and mentors will go to the competition site and check in to the hotel. This is the Advance Team. The Advance Team typically consists of the drive team, safety sub-team captain, and a couple of mentors. This group is there to set up the pit, unpack the robot, and start the robot inspection process.
- **Friday:** The rest of the team will leave early in the morning to arrive at the competition site as early as practical. When the team arrives it starts the competitive assessment process, locates a place in the stands, and walks around getting to know the other teams by trading buttons with them. Usually our robot will practice several times during the afternoon. While waiting for our robot, the photo/scouting team is gathering

competitive assessments of the other robots. Usually the day ends at 5:00pm. The drive team and safety team may be required to stay and work on the robot until the pit closes. The remainder of the team will go to the hotel to check in and get dinner. Dinner will be held as a group if possible. When dinner is done the team will return to the hotel depending on time.

- **Saturday:** In the morning, if possible, the team will have breakfast together. The entire team will arrive at the competition as soon as the venue is open, typically 8:00am. The Spirit and PR sub-teams, as well as other team members, will locate a place in the stands, while the Business and Scouting teams work on their assignments. We may have as many as four or five seeding matches on Saturday. The competition generally closes with a ceremony. Sometimes there will be a team social. If possible, we want to attend social functions as a team to make good contacts with the other teams. Dinner arrangements will vary. There will be a team meeting in the evening to review scouting data and prepare for Sunday.
- **Sunday:** Saturday morning the pits open up at around 8:00 am. Students normally need to pack up at the hotel and be ready to leave. Room inspections will be performed by mentors and/or parents. Upon arriving at the venue, our team again locates a place in the stands. Opening ceremonies start at 9:00am with the final seeding matches following. Depending on the format of the competition the finals occur in the early afternoon. At the conclusion of the competition there is an award ceremony where the remaining trophies are passed out. When this is complete the safety team and drivers pack up the robot and the pit to return home. This is usually around 5:00pm. Then students need to meet with their assigned drivers for the trip home. Dinner will be coordinated on the trip home.

## Things We Do At An Event

Students need to use all of the positive behaviors described in the Conduct section. At each of these events, there are some basic expectations for students at competition.

- **Cheering**  
Cheering is more than yelling at the top of your lungs. True cheering is enjoying the event and celebrating the excitement of the moment. You are not expected to be cheering 100% of the time. However, when we are cheering all team members are expected to stand and cheer to the best of their ability. Sitting in the stands looking bored, playing video games, carrying on personal conversations while others are cheering is not good for the team image.
- **Award Ceremony**  
During the ceremony we will applaud the teams who are winning awards. When we applaud we may stand to show our respect for what they have accomplished.
- **Litter/Housekeeping**  
If you see a mess (paper or trash) you should make an effort to pick it up. That goes for the area you are sitting as well as any other location in the arena. Make sure your area is cleaned up before you leave.

## Things We Do Not Do At An Event

- Our team will not engage in negative behavior toward another team or team member.
- Our team will not display displeasure over any decision by a referee or judge.
- Team members will not exchange negative remarks to each other, no matter what the situation.

## Resources

- ART use several forms of communication to keep up with students and activities. The most common means to follow the team are the website calendar and email. Occasionally, mentors will use text messaging to contact students and parents. All students must have a functional email address and check it regularly. **Email is the PRIMARY means by which information will get passed to students.**

## Contact Information

- Team Website - [www.argsrobotics.com](http://www.argsrobotics.com)
- FaceBook - [www.facebook.com/FRC5546](http://www.facebook.com/FRC5546)
- Twitter - [@FrcTeam5546ART](https://twitter.com/FrcTeam5546ART)
- Instagram - [https://www.instagram.com/frc\\_5546art/](https://www.instagram.com/frc_5546art/)
- Mentor Anita Crowder - [acrowder@args.us](mailto:acrowder@args.us)
- Mentor Alex Salas - [asalas@args.us](mailto:asalas@args.us)

## Organizational Resources

- FIRST Main Organization - [www.firstinspires.org](http://www.firstinspires.org)
- FIRST Chesapeake - District Organization - [www.firstchesapeake.org](http://www.firstchesapeake.org)
- Chief Delphi - [www.chiefdelphi.com](http://www.chiefdelphi.com)

# 2018-2019 FRC Schedule

Chesapeake District Schedule as of 9/18/2018. We plan to try for Week 1 (Richmond or Haymarket) and Week 3 (Portsmouth).

WEEK	DATE	EVENT	LOCATION
	November 10, 2018	<i>FIRST</i> Robotics Competition Workshops	Virginia Commonwealth University, Richmond, VA
	January 5, 2019	FRC Kickoff and Game Reveal	worldwide
1	Mar 1-3	<i>FIRST</i> Chesapeake District Richmond VA Event	Deep Run H.S., Glen Allen, VA
1	Mar 1-3	<i>FIRST</i> Chesapeake District Haymarket VA Event	Battlefield H.S., Haymarket, VA
2	Mar 8-10	<i>FIRST</i> Chesapeake District Bethesda MD Event	Walt Whitman H.S., Bethesda, MD
3	Mar 15-17	<i>FIRST</i> Chesapeake District Owings Mill MD Event	McDonogh School, Owings Mill, MD
3	Mar 15-17	<i>FIRST</i> Chesapeake District Portsmouth VA Event Sponsored by Newport News Shipbuilding	Churchland H.S., Portsmouth, VA
4	Mar 22-24	<i>FIRST</i> Chesapeake District Oxon Hill MD Event	Oxon Hill H.S., Oxon Hill, MD
5	Mar 29-31	<i>FIRST</i> Chesapeake District Blacksburg VA Event	Blacksburg H.S., Blacksburg, VA
7	Apr 10-13	<i>FIRST</i> Chesapeake District Championship	George Mason University, Fairfax, VA

**\*\*\*World Championship in Detroit, Michigan Apr 29-May 2, 2019\*\*\***



# ART Student Contract

*In order to ensure parents/guardians and students understand the responsibility and commitment needed by each team member, please take the time to read over, initial each statement, and sign this contract. Students who fail to comply with the expectations after reasonable warnings may be asked to leave the team, or be supervised by an adult at all times.*

\_\_\_\_\_ I realize no robotics problem has only one solution, and a successful team is one which cooperates by considering everyone's solution and ideas. I also agree to cooperate on whatever solution the team chooses, even if it is not my first choice.

\_\_\_\_\_ I agree my behavior at meetings and tournaments will be constructive and I will treat my teammates, adult volunteers and my coaches with respect.

\_\_\_\_\_ I agree each team meeting is valuable and will attempt to attend each meeting. If a conflict arises, I will notify my coach in advance and I understand if I repeatedly miss team meetings I may be removed from the team or unable to compete at the competition.

\_\_\_\_\_ I understand competitions are long, tiring and sometimes frustrating. Because I am a member of a team, I am committed to being at competition, even if I don't want to be there, because my team needs me.

\_\_\_\_\_ I agree the goal of my team should be to do our best to work together to solve a challenging problem. As a member of the team, I will contribute to all aspects of the process, not just the parts I like best.

\_\_\_\_\_ I agree all solutions, including the robot, props, costumes, signs, PowerPoints, videos etc. will be made completely by me, or a member of my team, and not the adults.

\_\_\_\_\_ I understand the robotics program recognizes all teams who bring a solution to the tournaments are considered "winners". I agree to show other teams the utmost respect and good sportsmanship.

\_\_\_\_\_ I agree to respect the buildings, rooms, furniture and equipment used by the Robotics team.

\_\_\_\_\_ I understand each member of the team has a valuable role to play and even if I am not chosen to be the "driver" of the robot at competition, my team still needs me and I will still give 100%.

Name of team member: \_\_\_\_\_ Grade \_\_\_\_\_

Signature of team member: \_\_\_\_\_ Date: \_\_/\_\_/\_\_



# ART Parent Contract

\_\_\_\_\_ I agree, in the proper spirit of Robotics, not to interfere with the team's solutions. All creations, inventions, ideas, must come from the team members.

\_\_\_\_\_ I agree to make every effort to have my child attend every team meeting. If there is a conflict, either my child or I will notify the coach as soon as possible. I understand my child has a commitment to his/her team.

\_\_\_\_\_ I realize my child's coach will be contributing a significant amount of volunteer time and effort to provide this rewarding experience for my child and the team. I will try to be as cooperative and helpful as possible.

\_\_\_\_\_ I realize the coordinators and mentors of my child's robotics program will be contributing a significant amount of volunteer time and effort to provide a positive experience for all students and parents. I will try to be as patient and understanding.

\_\_\_\_\_ I agree to discuss all items listed above with my child, and will participate in discussions with my child's coach regarding behavior concerns.

\_\_\_\_\_ I agree to pick up my student promptly at the end of scheduled meetings and ensure my child arrives on time to competition.

\_\_\_\_\_ I understand the robotics program at my child's school is completely volunteer run, and order for my child to participate, I will be expected to contribute my time.

\_\_\_\_\_ I understand in order for my child to participate in the program, I will be required to volunteer during the build season and possibly also at competitions.

\_\_\_\_\_ I understand if I don't show up on the date I am scheduled to volunteer, my team may be left unattended in the school. I understand it is my responsibility to find a substitute for myself should my schedule change after I agreed to volunteer.

Student name(s) \_\_\_\_\_

Name of parent or guardian: \_\_\_\_\_

Signature of parent or guardian: \_\_\_\_\_ Date: \_\_\_\_\_



# ART Medical Information/ Consent Form

Student Name: \_\_\_\_\_

Parent/Guardian Name: \_\_\_\_\_

Parent/Guardian Phone numbers:

Home: \_\_\_\_\_ Cell: \_\_\_\_\_ Work: \_\_\_\_\_

Email: \_\_\_\_\_

Secondary contact for an emergency if parent/guardian cannot be reached:

Name: \_\_\_\_\_ Relationship: \_\_\_\_\_

Phone Numbers:

Home: \_\_\_\_\_ Cell: \_\_\_\_\_ Work: \_\_\_\_\_

Family Doctor: \_\_\_\_\_ Phone: \_\_\_\_\_

Other doctors/specialists: \_\_\_\_\_

Medications which team member takes on a regular basis:

\_\_\_\_\_

Allergies (note if life-threatening):

\_\_\_\_\_

My child has a prescription for an "Epi-Pen": \_\_\_\_ Yes \_\_\_\_ No

My child carries an "Epi-Pen" with them at all times: \_\_\_\_ Yes \_\_\_\_ No

Other Medical Conditions/information:

\_\_\_\_\_

*ART Medical/Consent Form Continued*

While traveling with the team, I give permission for my child to take (please circle):

Tylenol      Ibuprofen      Benadryl      Tums and/or Pepto Bismol

Other: \_\_\_\_\_

In case of an emergency, if neither I nor my other emergency contact cannot be reached. I give permission for Team 5546 mentors to grant permission to medical personnel to treat my child:

\_\_\_\_\_

Parent/Guardian Name- PRINTED \_\_\_\_\_

Parent/Guardian SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

