

M.E.R.I.T.

Mentoring

Experienced

Robotics teams

In

Transition

A program developed by and offered by

Team 303 Panther Robotics

Mentoring Experienced Robotics teams In Transition

Have you lost your funding?

Have you lost your mentor(s)?

Have you lost your advisor?

Have you lost your engineer(s)?

Have you lost your build space?

Have you lost your partner school?

Are you a veteran FIRST team that is in danger of "dropping out"?

Are you struggling to rebuild?

Are you wondering how you can achieve sustainability?

Team 303 experienced ALL of the above in 2007 and wants to help other teams looking to survive and thrive. We have rebuilt and restructured. We have reinvented ourselves and know how challenging it can be.

When rookie FIRST teams are just beginning everyone wants to help. There are programs in place to support and nurture their growth. Every veteran team has been through the rookie year and is familiar with the challenges of nurturing a new FIRST team.

In 2007, we found that veteran teams do not have the same support structures to help rebuild. When we reached out to our friends we certainly found very helpful advice, but we quickly became aware that building a new team with a veteran number is not a well worn path.

Every year, new teams are added to the FIRST family, while veteran teams are lost to challenges they could not overcome. Every veteran team lost is an opportunity lost for students. **Team 303 wants to help.**

If you find your team is struggling to survive or facing challenges please contact us. We can help you identify your strengths and your needs. We want to assist you in creating a survival strategy that works for you. Our goal is to help FIRST retain quality veteran teams that will continue to provide valuable opportunities to current and future students.

Through our rebirth, we have discovered that we actually became a stronger and more dedicated team. We are a different team. We are more self-sufficient. We have solicited more parental involvement and convinced more people in our community about the benefits of supporting FIRST and its mission.

Contact Team 303 Panther Robotics if you have questions or want more information. There is no charge. We just want to help. We are family...

Mike Panzarella, Team Advisor

303.advisor@gmail.com

Mark Andrews, Senior Mentor (build team / strategy)

MrA303@gmail.com

Carolyn Nasson, Senior Mentor (non-build / administrative)

CCN303@gmail.com

The Team 303/ Panther Robotics Story

Team 303 was started in 1999 as a joint effort of Bihler Corporation of America, Pingry School, and The Midland School, a school for children with disabilities. When Pingry dropped out after its rookie year, Bridgewater Raritan High School was invited to join Team 303.

We had seven fantastic years with Bihler and Midland. Bihler handled our expenses, loaned us experienced engineers, and allowed us to build in their state of the art machine shop. We built award winning robots and graduated students with whom we are very proud to be associated. Our partner school, Midland, helped on and off the field and gave the BRHS students lessons in patience and compassion. They also taught us that we are all alike in spite of our outward appearances.

Late in the summer of 2006 everything changed. Bihler Corporation was moving its North Branch, NJ production to their larger Alpha, NJ facilities. The 45 minute commute each way made it impractical for BRHS to continue working with Bihler. When Bihler moved from its location across the street from Midland, Midland also withdrew, saying that they could not provide transportation or teachers to another location. Sadly, two of the three partners in Team 303 said their goodbyes.

The next week, our team advisor told us that he was leaving the team to take a teaching position with Montgomery HS and Team 1403. Just like that, we had no money, no build space, no tools, no engineers, and no advisor. What *did* we have? We had a team number, a proud history, and a strong will to survive.

We started with a couple of parents who had been around long enough to know the value of Team 303 and FIRST Robotics. Our previous advisors, Tim Leicht (now of team 1403) and Paul Kloberg (now a FIRST Senior Mentor) helped with securing a new advisor. A math teacher from our school stepped forward to be our new advisor. He had not yet been to a regional, or even an off season event, but he soon learned a lot about FIRST and Team 303. At our first full team meeting, parents included, that fall, we told everyone where we stood and people began to provide us with leads to pursue. When we were in our hour of most need, we experienced a positive and supportive reaction from our team parents and students.

We had students who were up for the challenge. We focused on our needs: build space, tools, money. Our school does not have a machine shop and has no space for one at this time, so we had to find a space. While we approached local businesses, we knew that we could always build in someone's garage if we had to. We knew that whatever else happened we would need money, so we started fundraising. Asking for sponsorship funds from businesses, family and friends brought in the bulk of the money, while a can shake outside of Shop Rite in conjunction with cell phone and ink cartridge recycling helped us towards our goal. We spread the word about our situation through public relations articles in local newspapers.

We met every weekday afternoon after the Kick Off to brainstorm ideas, but still had no build space. By week three, we had finally found a home. A friend of one of the team mentors contacted another friend who had 1000 square feet in his facility to offer. No tools and no engineers, but we now had space, electricity, lighting, and an internet connection. We utilized the next few days to set up. The fundraising we had done

allowed us to purchase certain essential tools. Other necessities we borrowed or had donated to the team. Our programmers did not have a robot to work with until the day before shipping. That two and a half week build time was tough, but we did it. By the last qualifying match at the NJ Regional everything worked on our robot. We were not chosen for finals, a first for us, but **we were WINNERS!** Team 303 had survived...

STEP 1: TEAM ASSESSMENT

Your team has suffered a loss or is going through some changes. It is time to evaluate where you stand. What are your team's strengths? What parental talent can you draw on? What needs support or restructuring? Team 303 can help guide you through the process. Let's begin.....

First, let us look at what a healthy team has (just the basics):

- Students who are interested and willing to work. Teams need not only the engineering and machining minded students, but the computer savvy and those with a talent for organization.
- A team advisor. This could be someone from the school or a parent. Assuming this is a school based team, the school will have to approve whoever is the advisor. A school will usually want someone who has a teaching certificate.
- Engineers or people with experience in design and build. These could be engineers working with your sponsor, parents, teachers, or mentors from the community. Ideally, they should not only be able to design and build, but offer guidance and instruction to the students as well. Ideally, a mentor should guide, not dictate.
- A build space and tools are necessary if you are going to build a robot. This could be at the school, the sponsor's facility, or in someone's garage, basement, or barn. The tools can be very basic or state of the art. Please be certain the students know *how* to use them *safely* and *correctly*.
- Computers for the programmers and for general team support and organization. Website design, Animation, and Inventor are options offered to every FRC team and students are encouraged to learn how to use the programs and develop their skills.

- Supportive parents are a valuable asset to any team, especially FIRST teams. Not every parent shows up for every meeting, but they should be required to attend at least one or two meetings to learn about what the team is doing. Make a special effort to invite them to your regional and off season events so they see the bigger picture.
- Money is required. This is a valuable experience for your students and it does cost money for entry fees, materials and so on. Usually the funds come from a variety of sources: school, sponsors, and fundraising.
- Communication between all parties is essential. Meetings, e-mail, phone calls, website bulletin board are all tools that can be effectively utilized.

TEAM ASSESSMENT WORKSHEET

Have a meeting of the key people on your team. If you have an advisor, the advisor should meet with a couple of experienced and involved mentors/ parents who have been around long enough to understand the value of the FIRST program. If you need to, invite alumni or alumni parents to assist in the evaluation process. Just remember—this is not a time to look for blame or lay guilt on anyone. Keep your focus on the students and how you can continue to provide them with the opportunities a FIRST team can offer. This worksheet is meant to be completed by your key people. This tool can help to define your needs.

1. Do you have students who are interested/ motivated? It helps to have both experienced and rookie students for the long term survival of your team. A variety of talents and interests is required as mentioned previously.

2. Do you have a team advisor (s)? Is he/ she experienced or new to FIRST?
Does he/ she work well with the students?

3. Do you have engineers or experienced people to work with your students? How well do they convey their thoughts and do they involve the students in decision making? Do they explain reasons, rationales, and options for design in a way that they students can understand and learn from? Are they open to questions? If you do not have sufficient mentorship, who have you talked to about your team in the past that might help you now? What seeds have you planted that might bear fruit? Talk to friends, parents, grandparents, and colleagues.

4. Do you have a place to build? Do you have the tools necessary to build a robot? We all want a beautiful machine shop with computerized equipment that cuts with precision to the one thousandths of a millimeter, but a team can succeed with more basic tools. Decide on what your basic requirements are (“needs”) and dream later (“wants”). Reach out to people on your team for leads if you do not have the basics.

5. Do you have computers that can handle the needs of your team? FIRST supplies much of the software, but you will need memory and speed to process the information and programs your team will be using. Students can often bring in their laptops or work with much of the software at home. They may need to have Animation, Inventor, or website teams meet in someone's home. Our team reached out to a local business for computer time when the animation team needed help.

6. Do you have parents who are involved, supportive, and understand the value of their FIRST team? Do not underestimate the treasure you may have in your parents. They may be valuable resources not only for their knowledge but for their network of contacts. You will find many are eager to help.

7. Do you have funding? Does your school provide funding for your team? Do you have a sponsor, or sponsors, who have supported you in the past? Do you need to fundraise? Do you have experience raising money? How much money do you need? If this is a rebuilding year for you, maybe going to one

regional is enough of a goal. Set a realistic budget and fundraising goal and get to work.

8. How does your team communicate? Is it effective? What ways have you tried? Do you have the e-mail addresses of all members of your team? Do you have a website?

9. Any other issues? What challenge is your team facing that has not been covered?

STEP 2: THE PLAN

If you have filled out the worksheet, you have met with your key people and come up with a list of what your team has in place and what your team needs to thrive. Setting goals that will help your team reach whatever level you want to attain is the next step.

It is important to keep in mind a few important points:

- Your team, depending on how drastic your circumstances are, may not wind up “looking” the way it did before. Your team is going to change, and that change has already begun. Maybe the things you emphasized before just are not as important as they used to be. On the contrary, maybe they are. Remember, every year your team changes based on the students and other people involved. Trying to recreate what your team had in past years may not be realistic under these circumstances.
- ***FIRST is not about robots, it is about people.*** Your students will learn much about life through FIRST, if you let them. The process you are going through in this rebuilding year will teach them more than just what building a winning robot will. Winning is fun, but building or rebuilding a FIRST team is more rewarding in the long run. Team 303 has won on the field many times, but our team’s proudest moment was in seeing our team through the challenges of 2006–2007.
- You may not be able to get everything on your wish list this year, but keep your focus on what you *truly need*. If you get through this year, you can set higher goals for next year.

So what is your next step? Set some goals. Go through your assessment line by line. Based on each need, come up with a goal to address that need. Your goals should be clearly defined, and a timeframe should be placed on them. If possible, delegate tasks and meet often so everyone is kept current on the progress towards each goal. Keep notes and e-mail each other. Write down the goals and refer to them often. *Get the support of your students, your school, your mentors and parents. Let your community know that your team has done wonderful things in the past, has every intention of continuing that long into the future and that you need their help. **Get excited and get going!!***

How do you keep this from happening again? A team must always be looking to the future, grooming freshman students and parents, reaching out to younger students in the pre-high school years. Talk about the team to local engineering businesses. Plant seeds for the future wherever you can. If you want to create a sustainable program, you must nurture and train the newest people on your team and reach out for support in the larger community. Remember that your team will have an impact on the community as you graduate motivated and educated students, so be proud when talking about your team!

STEP 3: IMPLEMENTATION

Starting as soon as possible is important. Staying the course, staying positive, and staying motivated may be your biggest challenges as you restructure your team.

Teenagers, in general, are not known for their ability to remain motivated and focused. Give praise when smaller goals are achieved. Promise a big celebration at the end of the season. Have fun. Again... this is not about winning an award. This is about achieving something bigger. If your team fails, what happens to your students? If your team number can only be found in programs from previous seasons, what happens to the next freshman class entering your school? And what about the one after that? They'll never know the opportunity a FIRST team can offer.

What if you are not clear on what FIRST can do for students? Invite successful alumni to talk with the students and parents. This can be a powerful tool. These are people who fully realize what impact FIRST can have on a life. They would love the chance to help their team.

If there are some goals that seem too big, like finding a build space or a new sponsor, have a parent meeting. Even more easily attained goals could be in closer reach if you reach out to your parents. Some brand new team parent, or a parent who has not been involved much before, could now be your ticket to success: you will not know unless you ask. Lay out the challenges and the goals for them and discuss them. Make sure they have a clear understanding of the value of being involved in FIRST. Be excited and positive about the new direction in which your team is headed.

STEP 4: REASSESSMENT

As you achieve, or fail to achieve, your stated goals, take time to reassess and reorganize. Did you do what you planned to do? Were you successful? If you were not, how could you have improved your outcome? This is an ongoing process. Do not wait until after your regional is over to decide whether you succeeded or not. If you shipped a robot that worked to some degree, you have achieved a lot. The measure of success is not whether you brought home an award, but whether your students learned something and were proud of their achievements. If they are proud, you have done your job well, and you have something to build on for next year.

Celebrate with your students. This is their achievement too. Again, if you have done your job right, they should have a new found sense of pride and ownership of their team. This is a good time to plan for the next year. They are excited and know that anything is possible if they work hard enough. That is a great lesson for all of us.

NEED HELP?

Please contact Team 303 if you have questions or need guidance. We are happy to talk with you and listen to you. We can't fix everything, but sometimes we can clarify an issue or point you in the direction you need to be. If we can meet with you, we will be happy to do that. You can believe us when we say we have been there.

We would appreciate your feedback, too. This is a new program developed after our own challenging year. The challenges that you are facing we may not have foreseen. The opportunities of FIRST need to be preserved for the veteran teams and extended to new teams. When you succeed, and we know you will, we know you will spread the word about FIRST.

Contact us at:

Mike Panzarella, Team Advisor

303.advisor@gmail.com

Mark Andrews, Senior Mentor (build team)

MrA303@gmail.com

Carolyn Nasson, Senior Mentor (non-build/ administrative)

CCN303@gmail.com

We will direct your questions to the most qualified person to answer you. Send an e-mail with your phone number if you would like to talk to us directly.