



# K-Botics

FIRST TEAM 2809



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2809KBotics

## We're Back At It

### New York Tech Valley Robot Rumble

On Friday, October 3rd 2014, K-Botics left on our first competition of the year! Destination: Ballston Spa, New York State. The purpose of this trip was to introduce new members to the atmosphere of competition and to create a team building experience.

We left on Friday at 4pm and drove to our destination, arriving at approximately 11:00pm. We checked into our hotel and it didn't take too long for all of us to fall asleep. We woke up on Saturday at 6:30am. Although bleary-eyed, we had a quick breakfast and then hurried off to the venue.

This competition was shorter than we were accustomed to, lasting one day instead of the usual three. This was due to the fact that it was an off-season "fun competition," and did not qualify teams for the world championships in St. Louis, Missouri in May.

K-Botics made it to the semi-finals and that evening we left in high spirits. We arrived in Kingston at 10:30pm we were all exhausted from the long day. Overall, this was a very fun competition and a great learning opportunity for both new and returning members. We hope to have as much fun in all of our upcoming competitions.



## Bottle Drive

On Sunday, September 28 (28/09), K-Botics celebrated 2809 day by organizing our fall bottle drive. It was a gorgeous day, and we had a great turnout. We all met at the school, and from there parents and mentors helped drive our K-Bots around the downtown area. New K-Bots quickly caught on to how bottle drives work, and soon learned where the best houses were for the most profit. After a long afternoon, we made a grand total of \$551.60, which will help us offset the cost of this year's build season and competition trips. We'd like to thank all the k-bots and parent volunteers for making this day so successful.



## What Our Team Is Saying



### Chloe (New Mentor)

"Working with team 2809 this year has been an enjoyable experience. It has been great to see the students on the team, who have a wide range of background knowledge and skills, working together, learning from each other, and getting excited about STEM. The students are consistently engaged in the sessions and enthusiastic about learning new concepts. I look forward to seeing these students continuing to develop their technical skills and problem solving abilities



## Rico (New K-Bot)

I really like robots and how you get to program them to function autonomously. I'm really into R.C. and would like to upgrade them and make my own. I also like getting to know how different things work; it's a good skill to have for my future. I'm a new member and I already know I'll be returning next year. I love the hands on experience because I'm able to get a better understanding of the concepts. I'm more comfortable now that I've done it myself instead of watching a video.

My sister is coming to K.C. next year and I will definitely encourage her to join as well. I'm a part of the Mechanical team right now but next year I would like to try electrical.



## Edwin (New K-Bot)

I'm a new robotics member interested in electrical. I've already learned a lot from Mr. Wood who knows a great deal about circuits, sensors and controllers. We are still in the early stages of design, so there is a lot of communication required between the various groups (i.e. mechanical, electrical and software) to coordinate the overall robot design.

Right now I am learning a lot about how complicated it can be to wire many different components of the robot. It is really incredible how much wiring is generally used in a single robot. I am also learning new skills that can be applied outside of K-Botics and that would be useful in real life. This includes how wire size is measured and different ways that they can be connected, such as crimping. As we continue to learn new ways in which the electrical systems are put together and how each part needs a certain amount of power, we have to problem solve ways to keep the wire relatively still while getting the power to each component efficiently. All of this comes together to make electrical really interesting and something that can be fun to do.



## What Our Groups Are Up To

This year we decided to take a different approach to pre-season. We chose to break into three different groups to have a deeper learning and hands-on experience for specific skills. The groups we divided into are mechanical, electrical and programming.



### Electrical

Currently in electrical we starting to make a plan for how we would like to wire the robot as well as trying to come up with some ideas about ways to make everything neat and easier to find. For the layout of the robot's components we are using a program called CAD that is essentially a computer program where you can make design and models of different components and parts.



### Mechanical

For the past two months, the mechanical group has been learning how to design our very own chassis. We started by learning all the components of a chaise. Recently we've been learning how to CAD sheet metal. The whole group is very excited to start building the chassis in a few weeks.



### Programming

The programming team is hard at work at learning how to program motors to function on our robot. They've also recently learned how to program an X-box controller to control the robot. There's many new members so they're starting right from the basics but everyone is learning really quickly.



Thank you to all our:  
Sponsors  
Mentors  
and parents  
for making all of this possible

