



FRC Team
2199

KICK-OFF 2013!

By: Coralie M.



On Saturday, January 5th, four Robo-Lions were at Capitol College in Laurel, for the 2013 Season FRC Kick-Off. Besides finding out about the new game and getting parts to use in the making of our next robot, we also helped other teams to find

and load their kit of parts.

The entire day is filled with suspense and excitement, since teams never get to see the official game manual until the game is officially revealed and passwords given out to unlock the encrypted game rules file.

Now the focus is on the new game, and what a challenge it will be! Teams need to build a robot to throw Frisbees with accuracy, and then climb a 10' tall pyramidal structure reminiscent of playground monkey bars. This game may

look like child's play, but it promises to be hard work for robot-builders.

Robo-Lions at Kick-Off attended a session on game strategy and a new offering. Representatives from NASA/GSFC's Robotics Alliance Project and Smooth-On, Inc. taught "Introduction to Silicon Rubber Mold Making and Casting Materials."

We now have our kit of parts, extra knowledge about the game, and how to make resin parts. We're ready to start build season! ✧

FIRST Robotics Competitions (FRC) combine the excitement of sport with the rigors of science and technology

to provide students a "real-world engineering" experience.

~ www.usfirst.org

DR. WHO AND MR. DALEK FEATURED AT FRIGHT NIGHT OUTREACH EVENT

By: Scott T.

On October 26th and 27th, FRC Team 2199 added a special attraction to the Freedom Fright Night at Freedom Park. As an affiliate program of the Freedom Area Recreation Council (FARC), we displayed our 2012 Robot, "Amanda Dumm Jr." as well as our 7'+ tall "Emperor Dalek" modeled after the TV series *Doctor Who*. Built by the Milnes Family, the Dalek was comple-

mented by inimitable Scott T. dressed up the 10th Doctor in the series. The Emperor Dalek was a great hit with attendees young; and old, with numerous requests to see "what was inside". Some called it the "big robot", but most were unaware of the secret kept by team member Tommy M., who operated the Dalek from deep inside.

"Amanda Dumm Jr." was

also very popular, tossing basketballs while team members shared their *FIRST* experience with the crowd.

Many of the team members came in costumes to add to the atmosphere, and others helped sell concessions. All are looking forward to next year's Fright Night and another chance to share robots and more with the community. ✧

Contact us:
www.robolions.org





ROAR OF THE ROBOTS

By: KC E.

There is nothing like a robotics competition in the morning! Volunteers greet each other with bleary eyes as they start to set up the competition fields and go over last minute checks on supplies before the teams arrive, and anxious teams line up early outside the venue. FIRST Lego League (FLL) Qualifiers and JrFLL Expos are a great example of the energy in FIRST programs. The Robo-Lions are leading the way as local hosts for these events benefitting students in grades K-8.

This year, the Robo-lions went to great lengths make the “Roar of The Robots” as memorable as last year. With their FRC robot acting as a draw for the young and old alike, the Robo-Lions spread the joy of robotics in more ways than one. Mikey and Connor showed off the teams robot while their teammates Patrick and KC served as DJ's and announcers for the seven team competition. The day also included a JrFLL Expo, with two local teams..

One of the team’s lead mentors was the Head Referee for the competition and took part in the training of the referees at the competition; other mentors were judges and coordinators. Volunteers came from our host Carroll Community College, the Robo-Cavs of South Carroll High School, our sponsors and many others. It was truly a community event. ✧



Clockwise from left- Current and Future Robo-Lions at the Roar of the Robots

- Carrolltowne Elementary’s newest FLL Team, the Cardinals, had some of the youngest FLLers at the event; they’ll be back next year!.
- The Lego Raiders are one of two PIE³-sponsored JrFLL Teams who came for their first Expo.
- Setting up the fields is serious work for volunteers, seen here in the Main Hall at Carroll Community College.

STYLIN’ ROBOTS

By: Bridget D.

Every fall and spring, the Robo-Lions set up shop at the Liberty High School Craft Fair, sponsored by the Instrumental Music Boosters. This November, we sold handmade jewelry, decorations, and energy efficient light bulbs. Team members shared a demo of our robot and talked to parents about the different *FIRST* programs their kids can get involved in.

Young children gathered around excitedly as we sent foam basketballs towards them to catch, and the FTC team chased toddlers around with their small robot, and an FLL robot was also on display. At one point, a two year old attempted to eat the FLL robot (though we caught him just in time).

Events like these are very important for the Robo-Lions

Below:

The youngest robot driver yet got some time on the controls at the Craft Fair. She can’t wait to get started with FIRST!



because they are an excellent opportunity to connect with our community and spread the message of *FIRST*. Not only do we raise money for our team, but we also find potential new members who are excited about engineering.

There is nothing more rewarding than telling a little kid that there is a team they can join at their school! ✧



BAA AND ROBO-LIONS VALUE EDUCATION

By: Patrick D. and Matt W.

The Baltimore Area Alliance (BAA), a coalition of more than a dozen FRC Team in Maryland, host training sessions each year to enhance team capabilities throughout the region. This year there were two training events, one especially for mentors and the second open to all. Robo-Lions were among the attendees and presenters on both occasions.

On Saturday, October 6, mentors from around the Baltimore area came together at Capitol College in Laurel to share experiences and to discuss long term plans. For many mentors, the topic is of sustainability is key. Fundraising was co-presented by team mentor Mrs. Young and The topic of Team Business Plans was covered by Team 2199 Captain Matt W. As the winner of the Queen City Regional Entrepreneurship Award last year, Matt was in a unique position to share with team mentors the importance of a sound business

plan and some of the tips he learned in developing his successful vision.

Saturday, November 3 was this year's major training event, known as BAA Education Day. Around 200 FRC teams members and mentors from throughout Maryland met at the Kossiakoff Center at Johns Hopkins Applied Physics Lab to learn about building robots, competing, and team management.

Team members displayed their Rebound Rumble robot and discussed the overall process that the team followed in planning and building it. They focused on the steps they took to design and prototype different ideas. Team alum Matt Eastman gave a presentation on Drive Train Systems, while mentors Tom Milnes and Mark Eastman covered Motors and Pneumatics systems. ✧



Left: The 2012 robot is featured as Mark Eastman provides training for mentors and students on the use of pneumatics

Above: Team members Patrick, Mikey and John are ready to be trained at BAA Education Day at JHU/APL.



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TWIN WINS!!!

By: Coralie M.

On Saturday, September 15, the Robo-Lions competed and won in the Battle O' Baltimore (BoB), held at Owings Mills New Town High School. This is the second year in a row that the Robo-Lions have won in this annual competition. One of the only teams to have two robots, entered, we actually had to compete against ourselves in the final matches.

Per our team tradition, we named the robots after the top two rookies on the team, who happened to be identical twins. The winning robot, was "Elizabeth Dumm Jr." and was crewed by Conner C- driver, Tommy M-shooter, James C- coach/human player, and Mikey W - coach/human player. "Amanda Dumm Jr." finished in 4th place and was crewed by Elizabeth D - driver, Amanda D- shooter, John S- coach, and Patrick D - human player

Baltimore was not a walk in the park! There were some unforeseen malfunctions of the robot "Elizabeth Dumm Jr." Its chains had fallen off after one of the matches. Because of this the robot wasn't able to move. But the team was able to fix the robot in time and take first place along with its alliance partners Team 888 Robotiators from Glenelg HS, and Team 4067 "The Incredible Hawk" from River Hill HS, an all Central Maryland Alliance! ✧



Battle O' Baltimore Champions! - Team 4067 "The Incredible Hawk" left, Team 888 "Robotiators" center, Team 2199 "Robo-Lions" right.

Photo courtesy of the Baltimore Area Alliance

SPONSOR UPDATE: INCOSE DINNER

By: Abi F.



Top: Team 2199 shows off their robot for INCOSE members.



Right: BAH employees-Team Mentor Wayne Fuller with Bill Olsen, an INCOSE member. The Robo-Lions are sponsored by BAH.

FRC Team 2199 was graciously hosted by INCOSE's Chesapeake Chapter for their November Chapter meeting at the Johns Hopkins Applied Physics Lab. INCOSE is the International Counsel of Systems Engineers. Members of the Team gave a presentation on the FIRST mission and how FIRST programs relate to systems engineering.

Systems engineering is what the team does every day without even realizing it. We are given a tough challenge to solve- building a robot. If we were to try to build it all at one time, the task of building the robot would never be accomplished. Instead, we break the challenge into parts and give each part to a sub-team. The sub-teams then work on their part of the problem. If the solution they arrive at doesn't work or is inadequate, it then must be reevaluated and modified until it is successful. After each sub-team has completed their task, they then come together and collaborate to pick a solution to complete the robot.

The night was a great success, and the engineers enjoyed it as much as the team did. To our great surprise, INCOSE generously donated a check to the team, which was promptly used to purchase sprockets, PWM cables, solenoids, and a new radio in preparation for the 2013 season. We welcome our newest sponsor, INCOSE. ✧