

**Lansdale Catholic High School  
Cyber-Crusader Robotics**

**Present**

**"Food Factor"  
Tune Up In PA**

**FIRST LEGO League Competition 2011  
November 19, 2011**

**As of: Sunday, November 13, 2011**

# “Food Factor” Tune Up in PA - 2011

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## **To all the Coaches, Judges and Adult spectators:**

For the past 14 years Lansdale Catholic High School Robotics has run this FLL local competition as a fundraiser for our high school team, to promote FIRST robotics in our area and help inspire young engineers to do great things. We are again partnering this year with Lansdale Catholic High School. This year we are very excited to welcome back our partner, the Delaware Valley Industrial Resource Center.

Please remember the idea of FIRST is to inspire students to think of careers in engineering and science. We accomplish this by putting them in challenging situations and helping them to succeed. The purpose of our competition is to allow your young engineers to test their creations in a fun and exciting format before they go to the state competitions.

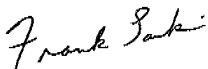
They will not forget that this is a competition and will behave accordingly. I want to make sure we all work together to help them enjoy this without the ugly side of competition we all see on TV and in our schools. FIRST's mantra is Gracious Professionalism. I hope we can all work and act accordingly.

LC Robotics will reward all teams for their efforts. Our goal is to praise some aspect of their project to make them feel good about the time they spent doing this. This daunting task falls on the shoulders of our judges. These folks are all professional engineers and scientists who have taken the time to help us determine the winners of our various awards. We owe them a great deal of thanks.

Our competition officials are high school students from our LC Robotics team. They are volunteering today because they know how great it is to be involved with this. If you have any problems please see me.

Finally let me thank you all for putting so much time and effort into this project. We owe you additional thanks for supporting our high school team by your continued participation in this event which is one of our primary fundraisers. Thank you all for your help and dedication.

Frank Larkin – 2011  
Lansdale Catholic Cyber-Crusaders



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## Introduction

This section will describe how the competition will be run at Lansdale Catholic High School in Lansdale, PA. This will give you a thorough understanding of what is going to happen and when. If you have any questions before the competition please direct them to me, Frank Larkin ([pafwl@aol.com](mailto:pafwl@aol.com)). The day of the competition you can look for me or my son Liam Larkin with questions, but in all cases we will direct you back to this document so spending time here will make the day go smooth for all.

Documents and photos can be found at [www.frc272.com](http://www.frc272.com). Click on the FLL Tuneup button on the left for FLL competition details. Please use these to become familiar with the venue.

If you need to get hold of us before you arrive please use my cell number at 215-823-9593.

## Pre-Competition Team Information

For this competition we need the following information from each team. Please gather this ASAP and e-mail (unless you have already done this) it to Frank Larkin at [pafwl@aol.com](mailto:pafwl@aol.com).

### *Head Count*

We need to know how many students you have on the team and how many coaches. Your entrance fee covers 2 coaches and a maximum of 10 students. When you arrive there will be pre-printed team labels to place on your shirts for each member of your team.

### *Project (Are you doing one?)*

We ask that you tell us in you are planning to do a project presentation. We ask because our judges need to know. **If you have not done so already please, let us know in advance if you are doing a project presentation.**

## Venue

The competition will take place on November 19, 2011 at Lansdale Catholic High School ([www.lansdalecatholic.com](http://www.lansdalecatholic.com)), 700 Lansdale Avenue, Lansdale, PA 19446. The actual competition will be in the school's gym on the second floor.

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## ***Directions***

Please use Google Maps or Map Quest for directions. Please park in the back of the school and enter through the center double doors.

Lansdale Catholic High School  
700 Lansdale Avenue  
Lansdale PA, 19446

[Google Maps Link to Lansdale Catholic](#)

[Map Quest Link to Lansdale Catholic](#)

## ***Inside Lansdale Catholic High School***

### **Admission**

There is no admission to this event this year for your parents or the general public.

Please remember this competition is a fundraiser for the Lansdale Catholic High School Cyber-Crusader Robotics. We are a veteran FRC team (#272) in our 14<sup>th</sup> season. Many teams across the country are in trouble because they never had to run fundraisers. This competition and our other fundraisers will hopefully pay our initial competition entrance fee of \$5,000. Additional competitions cost \$4,000. We also need to pay for robot shipping, travel, hotels, and food, not to mention additional materials to build our robots. As I mentioned in my opening letter we appreciate your support and cooperation.

### **Restrooms**

Restrooms are located around the building. Please look for posted directional signs. You can also ask any of the LC volunteers.

### **No Smoking**

There is not smoking in facility at any time.

### **Elevator**

There is an elevator in the middle of the school. Please let us know in advance if anyone on your team will need assistance.

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## Main Entrance and Registration

We would like teams to enter the building through the double doors off the main parking lot. There you will be greeted by our LC Ambassadors who can help you find your room. Go to the room together and then the coach can come back to the registration table near the library when you are ready to register.

At registration the coach will be given maps of the inside of the school and your team's ID labels. These are to be worn all day by your team members and must be clearly visible to the LC student referees at the competition tables.

**Our registration staff will only know you by your team number so please know it when you come to the registration table. We will have cross-reference lists next to the table. If you do not know your team number please look it up before you get in the registration line (assuming there is one).**

## Teams Pit Areas

The teams (48) will be located in classrooms and library, 2 teams in a room, spread throughout the school and in the expansion trailers in the parking lot. All the desks in the classrooms will be pushed back to give you plenty of room. You may sit in the desks as needed.

We expect that you will bring your competition mats and field pieces. Hopefully you can share with the other team. **Please let me know in advance if you want to be placed with another team.** I expect that coaches sharing a room will discuss ahead of time what each will bring. We are doing this to allow teams to keep working all day on their robots. **There will be no switching rooms the day of the event.**

If you are coaching 2 or more teams and need them close by please let us know in advance so we can accommodate your needs. We will order teams by sponsoring organization and their FIRST team number. We will do our best to keep teams as close as possible.

These classrooms will be needed on Monday so please leave them spotless. Here is no custodian to clean up the classrooms after the competition. **There is no erasing anything on the boards or writing on the boards as there is no one to clean up for Monday.**

Lansdale Catholic High School or the LC Robotics Team is not responsible for anything left in these rooms. Please make sure you keep valuables close at hand. **Any theft or vandalism in the facility will result in immediate disqualification of your team, expulsion from the competition and the building.**

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## Competition Gym and Traffic Flow

The competition will take place in the LC Gym on the second floor. Teams are responsible to follow the published schedule. The schedule is posted on a document you will be able to get from our web site. Copies of this will be posted on the walls throughout the building and in the trailers. There are TVs in each room that will be turned on to receive a feed from the competition gym. In addition we will be making announcements about what practice session and competition round and match we are queuing. **We will not be calling up individual team numbers.**

Before every practice session and match, teams will line up at the entrance of the gym on the right side against the wall in the marked areas. From there you will go into the competition gym when it is your turn. Please follow the instructions of the traffic people. Your cooperation will ensure a smooth competition.

**Important: Teams exiting the gym must exit to their right as to avoid the incoming teams. All non-team traffic will be stopped during these transition periods. Teams in the Competition Gym will move back to their areas when they are finished. Teams are responsible to follow the schedule. Failure to follow the schedule will cause you to miss practice sessions, judging interviews and possibly competition matches.**

## Judging

Because of space limitations and the fact that we want to accommodate as many teams as possible, the judges will visit teams in their pit areas (classrooms).

When it is your time to be judged...

1. We will try to schedule it so the other team in your area will be at another activity like practice.
2. Please try to work together. If the schedule gets behind or does not sync up exactly, we ask that the team that is not being judged to please leave the room before the judges arrive.
3. Before the judges arrive please have a few desks for them to sit in. This is especially important for the project judges.
4. Please have your team members ready to talk to the judges. If you are giving a presentation please have your materials ready.
5. If you are presenting to the mechanical or programming judges please have your robot ready, the field set up and your computer ready to show the judges.

The judges are all profession engineers and scientists who are donating their time to ensure that you kids have a great experience. Please treat them accordingly. They do not like to be delayed and will try to keep on time. They will try to be giving you their score sheets at the end of the day.

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## Food

Breakfast and then Lunch will be served up until about 2:30 pm. A variety of food will be available including....

**(Note: These are last year’s items and prices to be used as a reference. The menu has not been finalized.)**

<u><i>Beverages (Served All Day)</i></u>	<u><i>Price</i></u>
Milk, Apple Juice, Orange Juice, Lemonade, Ice Tea	.75
Soda	.75
Coffee, Tea, Hot Chocolate	.50
Bottled Water	1.00
<u><i>Breakfast Food</i></u>	
Bagels Plain	.50
w/Cream Cheese or Butter	.75
Pretzels	.50
Donuts	.75
<u><i>Lunch Food</i></u>	
Sandwiches	
Tuna Salad	2.25
Hotdog	1.50
Hamburger	2.25
Cheese Hamburger	2.50
Chips	.50
Soft Pretzels	.50
Pretzel Sticks	.50
Cookies	.50
Candy	.25 - .75

**All food is to be eaten in the cafeteria only. No food is allowed in the competition gym or in the classrooms. Please help us keep the school clean.**

# **“Food Factor” Tune Up in PA - 2011**

## **Additional Attractions**

### ***Horsepower 2011***

Our Cyber-Crusader’s robot for 2011 will be on display in the cafeteria. We will have students present if you have questions about its design and operation. Depending upon space you may be able to operate it and drive it around.

## **Contact Cell Phone Numbers**

We will have a cell phone (Frank Larkin’s) on during the competition. The number is 215-823-9593. Please use it to contact us for late arrival.

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## What Teams Should Bring To Competition

### *“Some what” portable computer*

You should bring a laptop or desktop computer to allow you to modify your programs. This will also be necessary for the judges to view your programs. If you expect to bring your computer into the competition gym during the practice rounds it must run on batteries because there will be no outlets available. **You will not be allowed to run your own extension cords across the floor in the competition gym.**

### *InfraRed Attenuation and Dampening System (IRADS)*

If you are using the Mindstorms "Brick" RCX (yellow) microprocessor with infrared download, you must bring an IRAD (cardboard box) to cover the robot and IR transmitter when you are downloading new software to your RCX. **You must attach your infrared transmitter inside the IRAD to prevent accidental downloads to other robots.** This **MUST, MUST, MUST** be used whenever you are downloading software to your robot. Did we mention it **MUST** be used! On your RCX robot you are allowed to place a piece of black electrical tape over your IR receiver as long as it is not a structural member. This can be removed for downloading and reapplied to make sure you do not get someone else's download. You should keep your robot powered off when you are waiting or it is not being used.

### *Batteries*

You should bring fresh batteries. There will be no batteries available in the competition site.

### *Dancing Shoes*

It is a tradition that we will be doing line dances between rounds in the breaks. Professional dance talent scouts have realized the breath of talent at these competitions and may be in attendance. ☺

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## *Playing Field Mats and Pieces*

### **Competition Fields**

This year we have again partnered with other competitions to purchase mats and field pieces. We have built 12 tables for the competition to ensure that you get as many rounds as possible. We have tried to make sure everything is correct but ask for your help. You will be assigned to compete on the same field for all your practices and runs. If there is something wrong with your field you and the other teams running on that field should help us correct it.

If your team is missing these pieces please let us know (Frank Larkin or Liam Larkin) and we will provide them for the day. We cannot provide an entire kit just a few pieces you may be missing. **These must be returned at the end of the day.** Please be aware that these fields will move on to additional competitions after ours so missing parts will cause a real problem.

### **Competition Details**

#### *Entering the gym as a team before a round*

As you might imagine there will be a lot of activity at the entrance to the gym. There will be boxes outlined in duct tape on the floor to the side of the hall at the entrance to the gym. These boxes will correspond to the playing field your team will move to when your turn comes to go into the gym to compete. **Coaches should stay with their team.**

**Parents must go into the competition gym and not stand on the line with the team as there is no room.** Please arrive for staging no earlier than 5 minutes before your match.

#### **Practice Sessions and Competition Matches**

Each team will compete in 3 practice sessions and up to 5 competition matches. You will be the same table on the same side throughout. Awards will be given for top 4 robots as described in the **Robot Performance Awards** section.

#### *Competition Table Field Pieces*

We continue to have problems with small pieces disappearing from the field. This has a tendency to slow up the competition not to mention raise the organizer’s blood pressure, namely me. ☺

This year, as in the past few, the fields will be equipped with only the Dual Locked pieces. You must bring all the portable pieces in a box that you will place on the floor near the base. We know this is a burden but experience shows pieces disappear from the field and stop the whole competition while we hunt for the item. Please download a piece check list from our web site at [www.frc272.com](http://www.frc272.com) (click FLL Tuneup)

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Your team must insure that the field is set up properly before the round starts. We suggest that you have your team practice this at home and in the morning practice sessions. You can use as many of your kids as necessary to ensure you get ready as quickly as possible. This is a little added pressure but is one of the points of this kind of competition. We know from personal experience that teams that set up quickly feel less pressure during the actual rounds.

The team coach and other team mentors will be responsible to ensure that none of your team members take any Dual Locked parts from the field when they leave.

## *Score Sheet and Scoring*

Coaches are responsible to get a score sheet from the traffic people. While you are waiting on the queue, please fill it out. Once you are at your table you will hand it to the referee. Please download a copy of the score sheet from our web site at [www.frc272.com](http://www.frc272.com) then click FLL Tuneup. **We ask that you review it and comment.** Please print extra copies and bring them with you. We will not have extra copies for you the day of the competition.

When your match is over please use your copy to score the round yourself. Then you and the student ref can concur on the score before your team leaves the field. The ref will read what they saw as you follow along on your sheet. Please resolve differences quietly. There is a LC student Head Referee (TBD) and a backup adult (Liam Larkin) to arbitrate. Their decisions are final.

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## Morning Schedule

The practice and judging schedule will run on 10-minute time blocks. This is to allow ample setup time, practice and clean up. There will be a lot going on and we ask that you keep an eye on the clock. Your team is responsible to follow the schedule. Please be sure that you are where the schedule expects you to be and be ready for whatever activity is taking place. If you have questions please ask the traffic people who are stationed at the entrance to the competition gym.

The morning will run to the following schedule.... (this is approximate)

Doors Open	7:45 am
Judges arrive for breakfast in the judges’ chambers. Judges please arrive promptly, check in and you will be directed to the judges’ chambers.	8:00 am
Practice Rounds and Judging Start (10 minute time blocks)	9:00 am
<ul style="list-style-type: none"> <li>• Teams who are scheduled to practice will lineup in the hallway staging area 5 minutes before their practice session starts. This is to get them used to the flow for the actual competition. If you are late fine you can go directly to your table. Failure to show for practice sessions indicates that your robot is working so great you do not need practice.</li> <li>• Each Practice round will be 9 ½ minutes with 1/2 minute to move in and out of the designated play area.</li> <li>• Teams, who are scheduled to be judged, must get ready 5 minutes before they are scheduled. If your team is not ready your team cannot be judged!</li> <li>• For the Programming Judging, teams must have either RoboLab or Mindstorms loaded and running on their computers. The judge may ask you to load a program. Be prepared to do so and discuss it with the judges.</li> <li>• Teams and Judges will have 9 minutes to discuss their project. That will leave 1 minute for the judges to move to the next room.</li> </ul>	
Judges Break	10:20 am
Judging Restart	10:30 am
Judging ends/Judges eat Lunch switch notes from morning runs	11:30 am
Coaches Meeting Competition Gym Coach and student team captain	11:30 pm
Round one	12:00 pm
Opening Ceremonies	12:30 pm
Judges re-interview teams as necessary.	12:40 pm

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## **Afternoon Competition Schedule**

The afternoon schedule will be given to you a few days before the competition. It can be accessed at [www.frc272.com](http://www.frc272.com) then click the FLL Tuneup link. We suggest you print a copy for yourself. There will be copies on the walls around the school.

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## Awards

### *Team Performance Awards*

#### **Outstanding Project Award**

Presented to the team whose presentation of research and conclusion best reflect an in-depth understanding of the various scientific disciplines and issues involved with the *Challenge* as well as creativity in determining a "solution" or "answer" to the question(s) posed.

#### **Teamwork Award**

Teamwork is critical to succeed in FIRST LEGO League and is the key ingredient in any team effort. FLL presents this award to the team that best demonstrates extraordinary enthusiasm, an exceptional partnership, and FLL values.

### *Technical Awards*

#### **Best Robot Design Award**

Presented to the team best demonstrating their understanding and contribution to their team's robot's construction, working mechanics, strategic design, program and unique robot attributes.

#### **Best Programming Award**

Presented to the team that best demonstrates it has an in-depth understanding of sound programming principles and applications for unique or exceptional execution of the *Challenge* Missions using the *NXT*, *Robolab* or *Mindstorms* programming language.

### *Robot Performance Awards*

Presented to the 4 teams whose robots achieved the most consistent performance in their top 3 rounds. The average of your 3 highest scores will be your final score. Your lower scores will only be counted in the case of a tie. The actual trophies will be named, **Exceptionally Capable Robot**, **Brilliant Performance**, and 2 with the name **Top Finalist**

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## **Judging Methodology**

As mentioned, judges will be moving from room to room to judge teams. During the actual judging period the coach is not allowed to talk but is there to observe their team to help them determine how to improve their interview at the state competitions.

## ***Mechanical and Programming Judging***

For the Mechanical and Programming judging sessions, teams can make a two minute presentation or just talk to the judges about their robot. This will allow the judges at least 7 minutes to ask questions.

The 4 groups of judges will each see 12 teams between 9 am and 11:30 am. This will give them about 9 minutes to talk to the team and 1 minute to move to the next room. The judges will then go to the faculty dining room for a break and compare notes. They will recommend a candidate for the various awards to the other judges who will revisit these candidates before the awards are made.

## **Mechanical and Programming Bullet Points Sheet**

Teams may hand the judges a 1 page and 1 page only typed paper discussing interesting bullet points about your program and robot design. It must have your team name and number. Please keep it short and sweet to help the judges to remember your team. Too much information and your paper may not be read. We will try to have at least 2 judges interviewing each team but we suggest you have 12 copies for all the judges you may end up seeing.

## ***Research Presentation (also called the Project)***

Research Presentations are not mandatory. Presentations will all be given in the classrooms that are your pit area. Please make sure you have your team ready 5 minutes before you are to present. Parents, coaches and other team members may be present but we ask that you be quiet. Any team found coaching during the presentation, as determined by the judges, will be disqualified from being considered for a presentation award.

Following the FIRST rules, presentations are limited to 5 minutes with the judges allowed to ask questions for an additional 4 minutes. This leaves 1 minute for judges to move to the next room.

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## **Project Bullet Points Sheet**

Teams may hand the judges a 1 page and 1 page only typed paper discussing interesting bullet points about your project. It must have your team name and number. Please keep it short and sweet to help the judges to remember your team. Too much information and your paper may not be read. We will try to have at least 2 judges interviewing each team but we suggest you have 12 copies for all the judges you may end up seeing.

## ***Final Thoughts***

Please remember our judges are professional engineers, scientists and college students at the junior level or above. They are giving up their time today to help determine our awards. They are under a lot of pressure to get done on time and with fairness. From past experience I know they take this very seriously. If you have any questions please direct them to me, Frank Larkin, or the judge coordinator Eileen Larkin. The judge's findings are final.

Each year teams have asked to get comments from the judges for improvement. I have not figured out a way to achieve this with the limited time that we have. We have limited man power and space. But as we did last year I will ask the judges to make their score sheets available. These will be distributed at the end of the day. Please listen to the announcements after the award ceremony for more information.