

## You Will Solve the New Challenge for 2011-2012



"Keeping Food Safe"

Can FIRST® LEGO® League teams improve the quality of food by finding ways to prevent food contamination? In the 2011 Food Factor Challenge, over 200,000 9-16\* year olds from over 55 countries will explore the topic of food safety and examine the possible points of contamination our food encounters – from exposure to insects and creatures, to unsterile processing and transportation, to unsanitary preparation and storage – then find ways to prevent or combat these contaminants. In the Food Factor Challenge, teams will build, test, and program an autonomous robot using LEGO® MINDSTORMS® NXT to solve a set of Food Safety missions as well as research, develop, and share their innovative food safety solutions. Throughout their experience, teams will operate under FLL's signature set of Core Values.

The FLL Core Values are the cornerstones of the FLL program. They are among the fundamental elements that distinguish FLL from other programs of its kind. By embracing the Core Values, participants learn that friendly competition and mutual gain are not separate goals, and that helping one another is the foundation of teamwork.

- We are a team.
- We do the work to find solutions with guidance from our coaches and mentors.
- We know our coaches and mentors don't have all the answers; we learn together.
- We honor the spirit of friendly competition.
- What we discover is more important than what we win.
- We share our experiences with others.
- We display Gracious Professionalism and Coopertition in everything we do.
- We have FUN!

Four Parts:

1. Table Challenge
2. Research Report
3. Teamwork Interview
4. Technical Interview

### Methodology

#### Educational Goals

For all team participants we work to gain expertise in the following key areas:

- Understand team work and the benefit complementary skills.
- Learn how to keep excellent project records.
- Gain expertise in core project management skills and methods.
- Experience the hard work of funding your project through external support resources.
- How to focus on a successful solution to a challenge.

**Attendance and Educational Goals:** Students participating in the team challenges must be prepared to attend nearly all meetings and work outside of the meeting time to continue to learn and do research. This year these two programs will be treated as classes and assigned a credit value.

**The Assumption:** The challenges can be done. Someone has solved it. So can you...

#### The Method: Your work should be...

1. Simple
2. Reliable
3. Repeatable
4. Precise

#### The Process:

1. Define the task
2. Describe the task
3. Propose solutions
4. Test
5. Refine
6. Record
7. Evaluate
8. Repeat



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