



# LEGO

The 22nd  
LCCC/Nordson

# OLYMPIAD

## 2012 COMPETITION RULES & JUDGING CRITERIA

### *General Rules for all Divisions*

- 1 Each team must provide their own Lego equipment (personal and/or school/sponsoring group supplied). Schools include public, private, and home schools. Teams can also represent families, Lego clubs, Engineering clubs, and affiliated groups (Boy Scouts, Girl Scouts, Explorers Post, etc.). The advisor can be a teacher, parent, scout leader, etc.
- 2 The highest-grade level of any of the team members will determine grade level category for the team.
- 3 Each Computer Controlled and Theme Division team must consist of at least two (but not more than five) members. These divisions are limited to students in grades **4–12**. For the Open Division, individuals or teams of up to five members can compete. These Open Division students can be in any grade **Preschool–12**.
- 4 Contestants are not permitted any outside help during contest building time (e.g. parents and advisors).
- 5 Construction must consist primarily of Lego equipment with the exception of supplementary materials such as string, rubber bands, tape, tin foil, wire, paper clips, etc., within reasonable limits. Excessive supplementary materials, or when used to hold bricks together, may result in a penalty at the discretion of the judges. For clarification, contact a LCCC representative prior to the start of the contest.
- 6 *Access to electricity will be made available for the Computer Controlled Division participants only.* Participants in any other category that require power are encouraged to bring their own cordless energy sources (batteries, battery packs, laptops, etc). These energy sources need to be fully charged prior to arriving for the competition. No charging of these devices will be allowed in the Spitzer Center the day of the competition. There will be no exceptions to this rule.
- 7 Food and beverages will be available for purchase. Participants are encouraged to bring bagged lunches if desired.

### *Additional Rules for Open Division*

- 1 Entries for this division must be **original** designs created by the members of the team. A significant portion of the overall score (15%) can be lost if it is proven that an entry is similar to a commercially sold Lego kit or published design.
- 2 Project entries must be completely unassembled at the start of the contest and be completed within the two hour fifteen minute limit. All assembly **MUST** be completed during the contest. **NO PRE-BUILT PARTS** are allowed.
- 3 During registration, prior to the start of the competition, we recommend utilizing the time to your advantage to sort and lay out your equipment. No assembly will be permitted during this time. Teams may sort their Lego's prior to arriving at the contest.

- 4        Sketches and/or drawings are required and judges will ask to see them. If they are not present, judges will take away points from the Engineering/Presentation criteria. Note: Engineering/Presentation is worth 45% of the total score.
- 5        Judging occurs during the assembly time as well as after final assembly. It has proven beneficial to prior contestants to prepare a presentation for the judges. It is the judges who you must impress with planning, background, presentation, teamwork, etc. (see judging criteria and scoring information).
- 6        There will be multiple Open Division categories organized by school grade. Depending on the number of registrations, categories may be broken down into smaller ranges. (i.e. may be broken down to 5 – 6, 7 -8, and 9 -12).
- 7        There is no minimum age restriction for this division. Anyone in grades **Preschool –12** is eligible.
- 8        Team members may wish to combine their personal Lego's for best results.

## ***Additional Rules for Theme Division***

- 1 Entries for this division must be **original** designs created by the members of the team. A significant portion of the overall score (15%) can be lost if it is proven that an entry is similar to a commercially sold Lego kit or previously published design.
- 2 Project entries must be completely unassembled at the start of the contest and be completed within the two hour fifteen minute limit. All assembly **MUST** be completed during the contest. **NO PRE-BUILT PARTS** are allowed.
- 3 During registration, prior to the start of the competition, we recommend utilizing the time to your advantage to sort and lay out your equipment. No assembly will be permitted during this time. Teams may sort their Lego's prior to arriving at the contest.
- 4 Sketches and/or drawings are required and judges will ask to see them. If they are not present, judges will take away points from the Engineering/Presentation criteria. Note: Engineering/Presentation is worth 45% of the total score.
- 5 Judging occurs during the assembly time as well as after final assembly. It has proven beneficial to prior contestants to prepare a presentation for the judges. It is the judges, who you must impress with planning, background, presentation, teamwork, etc. (see judging criteria).
- 6 There will be multiple Theme Division categories organized by school grade. Depending on the number of registrations, these categories may be broken down into individual grades.
- 7 A specific theme will be announced at the beginning of the contest (9:00 a.m.). Team members must then collaborate to design, document and construct a project that meets the requirements of the theme. All teams will be limited to the same theme. The theme will be non-motorized but the use of moving parts is allowed.
- 8 Teams will be disqualified or lose points if their project does not meet the requirements of the theme.

## ***Additional Rules for the Computer Controlled Division***

- 1 Each team must provide their own Lego equipment and computer control system. Control options include: MindStorms, Programmable Logic Controllers (PLC) and Computer based interfaces.
- 2 Programming can be done before or during the contest. Pre-saved programs will be permitted. Pre-written programs may be brought to the contest (on paper or in an electronic format).
- 3 During the contest, programming instruction reference guides can be used.
- 4 The number of Computer Controlled Division categories will depend on the number of registrations, this category may be broken down into smaller categories (i.e. 4 – 6, 7 – 8, and 9 – 12).

## **JUDGING CRITERIA & SCORING FOR ALL CATEGORIES**

30 %	<b>Engineering Merit</b>	Project planning with detailed drawings / sketches, mechanical ingenuity, use of physical forces, gears, chains, mechanical apparatus
20 %	<b>Complexity</b>	Difficulty of construction
15%	<b>Originality -Creativity</b>	Is it different / unique? Does it involve using an old / existing idea in a new / different way?
15 %	<b>Presentation -Aesthetics</b>	Team interview with the judges. Does it have a pleasant appearance?
10 %	<b>Functionality</b>	Does it work? Is it usable? Does it do what was intended?
10 %	<b>Team Work</b>	Attitude, enthusiasm, participation, and communication