

LEGO OLYMPIAD

The Fifteenth
LCCC | Nordson

Friday, April 8th, 2005

WHO: The Student Chapter of the Society of Manufacturing Engineers club on the campus of Lorain County Community College hosts area students for a one-day competition. This event is sponsored by the Nordson Corporation.

WHAT: The Lego Olympiad is a design and building contest using Lego-type construction components. The intention of the contest is to provide an engineering-related activity that exposes students to the world of mechanisms, machinery, moving parts, design, teamwork, planning, and construction techniques in a competitive environment. There are three divisions of competition:

The Computer Controlled and Theme Divisions allow teams of two to five members to compete using their own personal Legos and/or those supplied by their school/sponsoring group. These two divisions are limited to students in grades **4-12**.

- ◆ **COMPUTER CONTROLLED DIVISION:** Entries in this division must utilize a computer to control at least one electric motor. Control options include: MindStorms, Programmable Logic Controllers (PLC) and Computer based interfaces.
- ◆ **THEME DIVISION:** A specific theme will be announced at the start of the contest. Team members must then work together to design, document, and then construct a project based on the theme. This is a good choice for teams that have not had the opportunity to prepare for the other divisions. It will also challenge the team's ability to solve problems under pressure. There will be up to three Theme Division categories organized by school grade.

The Open Division allows students grades **K-8** (or younger) to compete using their own personal Legos and/or those supplied by their school/sponsoring group. Open Division participants can compete individually or in teams of up to five people.

- ◆ **OPEN DIVISION:** There is no minimum age restriction for this division. There will be three Open Division categories organized by school grade. This allows participants to compete with others around their own age.

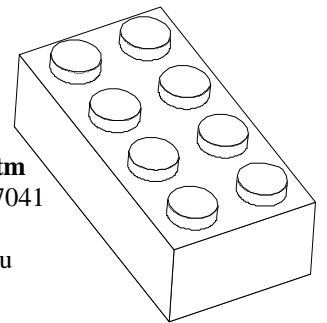
Trophies and awards will be presented at the conclusion of the contest. The entry fee is **\$4** per person. **There will be no onsite registration for any categories on the day of the event this year.**

WHERE: LCCC Field House, 1005 North Abbe Road, Elyria, Ohio

WHEN: Friday, April 8th, 2005

7:30 am - 8:50 am	Check-in for All-divisions
8:50 am - 10:00 am	Late check-in for participants not needing all of the available build time
8:50 am - 9:00 am	Opening Remarks
9:00 am - 11:15 am	Building Contest – Actual construction time
11:15 am - 12:45 pm	Final Judging (door prizes and more)
12:45 pm - 1:45 pm	Awards Ceremony

FOR MORE INFO: For the latest information visit us on the web at -- <http://chapters.sme.org/s254/olympiad.htm>
For general contest information or to be added to our mailing list, contact Linda at (440) 366-7041 or send E-mail to LMcLaugh@lorainccc.edu -- If you have specific questions regarding the contest rules etc., contact Scott Zitek at (440) 366-7024 or send E-mail to rzitek@lorainccc.edu



JUDGING CRITERIA & SCORING FOR ALL CATEGORIES

27.5 %	Engineering Merit (Mechanical ingenuity, use of physical forces, gears, chains, mechanical apparatus)
20 %	Complexity (Difficulty of construction)
12.5 %	Originality - Creativity (Is it different/unique?)
10 %	Aesthetics (Does it have a pleasant appearance?) <u>Note:</u> The color of the Lego blocks used is not considered.
10 %	Functionality (Does it work? Is it usable?)
10 %	Team Work (Attitude, enthusiasm, participation, and communication)
10 %	Presentation (Team interview with the judges. Is there a theme? Are there drawings and / or sketches?)

Registration and payment must be received by
Friday, April 1st, 2005 for all divisions

This contest is not associated or sponsored by The LEGO Group in any way. Contents deemed accurate at time of printing. Not responsible for typing errors, changes, or corrections made after printing. LEGO, Technic, and MindStorm are registered trademarks of The LEGO Group. Nordson® logo is registered trademark of Nordson Corporation.



Society of
Manufacturing
Engineers
Chapter S254

General Rules for all Divisions

1. **Registrations must be received by Friday, April 1st for all Divisions.** There will be no onsite registration the day of the event. There will be an entry fee of \$4 per person. All proceeds from this event will support the LCCC / SME Scholarship Endowment Fund.
2. 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.
3. **The highest-grade level of any of the team members will determine the grade category in which the entire team will be placed.**
4. 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. Individuals or teams of up to five members can compete in the Open division.
5. Contestants are not permitted any outside help during contest time (e.g. parents and advisors).
6. Entries for the all divisions must be **original** designs created by the members of the team. A significant portion of the overall score (12.5%) can be lost if it is proven that an entry is similar to a commercially sold Lego kit or published design.
7. 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 may result in a penalty at the discretion of the judges. For clarification, contact a LCCC representative prior to the start of the contest.
8. 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.
9. 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 Legos prior to arriving at the contest.
10. Sketches and/or drawings are not required but are recommended due to the possible awarding of additional points by judges. Note: Presentation is worth 10% of total score.
11. Judging continues during and after 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).

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. All programming is to be done during the contest. No pre-saved programs will be permitted. **No 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.

Additional Rules for the Theme Division

1. There will be up to three Theme Division categories organized by school grade.
2. Before the contest begins, the building components of each team in this division will be compared to ensure that they are similar enough to allow for a fair competition. Any discrepancies will be resolved by mutual agreement of the teams and judges. It is advised that each team bring supplementary materials such as string, rubber bands, tape, tin foil, etc.
3. 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 may require moving parts.
4. Teams will be disqualified or lose points if their project does not meet the requirements of the theme.

Additional Rules for the Open Division

1. There will be three Open Division categories organized by school grade.
2. There is no minimum age restriction for this division.
3. Team members may wish to combine their personal Legos for best results.



2005 LEGO OLYMPIAD REGISTRATION FORM

PLEASE PRINT - Information from this form may be used for press releases and future reference. Send or hand deliver this form with registration fee to: Engineering Technologies Division -Lego Olympiad, Lorain County Community College, 1005 North Abbe Rd., Elyria, Ohio 44035. Make checks payable to: LCCC - SME. **Please Neatly Print All Information.**

ADVISOR: _____ HOME PHONE # _____

ADVISOR'S E-MAIL ADDRESS: _____

SCHOOL/SPONSOR NAME AND ADDRESS: _____

TEAM NAME: _____

TEAM MEMBER'S NAMES:	1.	_____	GRADE _____
	2.	_____	GRADE _____
	3.	_____	GRADE _____
	4.	_____	GRADE _____
Maximum of	5.	_____	GRADE _____

Where would the team prefer to work (check one): On a table On the floor
 Small teams may be required to share a table.

CONTEST DIVISION: (check one)
 COMPUTER CONTROLLED THEME OPEN

Number of contestants _____ at \$4.00 each = _____ enclosed

**Registration and payment must be received by
 Friday, April 1st, 2005 for all Divisions**