

SYNOPSIS OF GAMES

The following six games will be showcased at the **High School Engineering Expo 2008** on Friday, February 8, 2008. Please indicate on the School Registration Form which one (or all) of the games your students will be participating in so that we may adequately prepare. *Game participation is limited to one team, per game, per teacher, per school.* Full details of each game will be included in the **Engineering Expo 2008 Workbook**, which will be sent to you upon our receiving your School Registration Form.

Due to time restrictions, games will be limited to the number of teams listed in parentheses. Participating teams will be on a first-come, first-serve basis. Turn in your School Registration Form as soon as possible to ensure game participation.

8:45 – 9:15 a.m.

Registration

9:00 – 10:00 a.m.

Engineering Exhibition

10:15 a.m. – 12:00 p.m.

Game Competitions

ALL GAMES HELD AT SAME TIME

Bottle Rocket Competition (24 teams) – sponsored by ASME

Gain experience with the engineering design process and test your ability to design, manufacture, and test a water propelled bottle rocket. The objective is to have the bottle rocket remain in the air for the longest time possible. Each team is required to submit a design report prior to competition day explaining materials used, cost incurred, along with theory of design used.

Coaster Mania! Competition – IMPROMPTU GAME* (Limited to: 18 teams) – sponsored by ASCE

Here's your chance to work as a team to design and build your very own roller coaster consisting of loops, turns, hills and jumps. Coasters will be judged on team participation, functionality, design, and originality.

Model Paper Column Competition (Limited to: 18 teams) – sponsored by Chi Epsilon

Design, build and test a small paper column that will be judged on workmanship and efficiency by the following equation: Efficiency = (Ultimate Load at Failure) X (Column Length in Inches) divided by Column Weight in Grams

Motor Building Competition – IMPROMPTU GAME* (Limited to: 18 teams) – sponsored by Eta Kappa Nu

Design and build an electric motor with equipment provided by the College of Engineering that will be prepared and constructed in 30 minutes during the competition and judged on certain factors.

Mouse Trap Racer Competition (Limited to: 18 teams) – sponsored by SAE

Can you build a mouse trap race car? This competition requires teams to build a small car (approx 12 inches long) powered only by the use of a victor M150 mouse trap and then race it against other teams. The students will compete by drag racing their car against a peer team set up in a double elimination format.

Egg Drop (Limited to: 18 teams) – sponsored by SWE

Test your ability to design and think creatively to form an engineering solution. Teams will design a damper to prevent a free falling raw egg from breaking. The damper will be placed at ground level whereupon the egg will be dropped over. The competition will require teams to design their damper prior to competition and the damper must meet design specifications.

Wendy's Spectacular and Magical Bubble-Blowing Competition (Limited to: 20 teams) – sponsored by CRDG, Invention Factory

Design, build and come ready to blow the judges socks off with your team's ultimate electronic soap bubble machine. Unique, wondrous and entertaining machines should be powered by battery and activated by holding down a single switch to control the "blower/s" and "wand/s." Bubble machines will be judged in 4 categories; biggest bubbles, most bubbles per minute, most entertaining, most unique wand mechanism.

***IMPROMPTU GAME is completed entirely during the Expo. No prior project completion is required. All materials will be provided at the Expo event.**