

SYNOPSIS OF GAMES

The following five games will be showcased at the **Junior Engineering Expo 2010** on **Friday, February 26, 2010**. 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. (More than one team per teacher may be permitted if space is available.) Teams will be limited to 3-5 students; limits vary by game. Students should only participate in one game since all games will be occurring at the same time.*

Full details of each game will be included in the **2010 Junior Engineering Expo Workbook**, which will be sent to you after we receive your School Registration Form.

8:45 – 9:15 a.m. Registration

9:00 – 10:00 a.m. Exhibition of Engineering - Details to come!

10:00 – 12:15 Games

ALL GAMES OCCURRING AT SAME TIME

PREPARED GAMES

Marshmallow Launcher Competition (Game limited to: no limit, Max: 5 students per team) – Sponsored by American Society of Mechanical Engineers Student Chapter, Society of Automotive Engineers, Pi Tau Sigma Honor Society
Thought marshmallows were just for eating? Get creative and design the best marshmallow launcher out there. Teams will compete by launching their marshmallows towards a target from various distances; which ever team collects the most point's wins.

Popsicle Stick Bridge Building Competition (Game limited to: 24 teams, Max: 4 students per team) – sponsored by the American Society of Civil Engineers Hawai'i Section

Do you like to design, build, and have lots of fun? Test your skills at building a popsicle stick bridge that meets certain specifications.

IMPROMPTU GAMES*

Coaster Mania! Competition (Game limited to: 18 teams, Max: 4 students per team) – Sponsored by the American Society of Civil Engineers Student Chapter and Chi Epsilon Honor Society

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.

Tsunami Shelter (Game limited to: 14 teams, Max: 3 students per team) – sponsored by the Society of Women Engineers Student Chapter

Teams will build a model tsunami shelter with materials provided on site, which will be tested in the University of Hawaii's wave flume (a trough 30' x 4' x 4'). A solitary wave will be generated at increasing wave heights. The goal is to be the last tsunami shelter standing.

High and Dry (Game limited to: 15 teams, Max: 5 students per team) – sponsored by the Engineers Without Borders Student Chapter

Can you build a structure to carry a cup of water across a distance of 100 meters. Sounds easy right? But wait, you will be given only certain materials and scoring the most points will be determined by a function of three independent variables.

Solar Powered Car Competition (Game limited to: 10 teams, Max: 5 students per team) – sponsored by Eta Kappa Nu and Institute of Electrical and Electronics Engineers

Alternative energy is the future! Build a complete mini solar powered car (materials will be provided), while learning how photovoltaic cells harness the energy of the sun. The final showdown is a race against the other teams to see who truly is the Sultan of the Sun!

***IMPROMPTU GAME is completed entirely during the Jr. Expo. The College of Engineering will provide all materials at the event. No game rules will be given prior to event day. No prior project completion is required.**

12:15 – 12:30 p.m. Awards