ORLANDO SCIENCE CENTER

Take the Challenge!
Think. Build. Win!

Overview:

The Orlando Science Center challenges science classrooms or clubs, grades 5 - 8, to transform ordinary and found objects into an artistic kinetic sculpture. Awards will be given based on the complexity of motion, the understanding of the science involved, mechanical innovation, and artistic expression. The Best in Fair winners for Junior Division (grade 5-6) and Senior Division (grades 7-8) will each receive **$500** for their science classroom and a trophy. There will also be awards given for Most Artistic and Most Scientific.

Purpose of the Competition:

The purpose of this competition is to motivate students to stretch the capacity of their unlimited imagination by transforming ordinary objects into a kinetic sculpture. It gives students an opportunity to apply the science concepts they are being taught in a fun, challenging, and rewarding way. This competition directly correlates with current science curriculum, utilizing the following Next Generation Sunshine State Standards for Science:

- **SC.5-8.P.10 - Forms of Energy:**
  A. Energy is involved in all physical processes and is a unifying concept in many areas of science.
  B. Energy exists in many forms and has the ability to do work or cause a change.

- **SC.5-8.P.13 - Forces and Changes in Motion:**
  A. It takes energy to change the motion of objects.
  B. Energy change is understood in terms of forces pushes or pulls.
  C. Some forces act through physical contact, while others act at a distance.

- **SC.5-8.N.1 - The Practice of Science:**
  A. The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.
  B. The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."
  C. Scientific argumentation is a necessary part of scientific inquiry and plays an important role in the generation and validation of scientific knowledge.
  D. Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.

Goals of the Competition:

- Construct a fun and artistic kinetic sculpture using common, everyday found objects.
- Include **movable parts** powered by an independent energy source.
  - * Energy source can include but is not limited to: electrical, solar, wind, human, or any combination of energy sources.
- Provide teachers with a creative program to meet Florida's Next Generation Sunshine State Standards in Math and Science.
- Provide an excellent opportunity for students to work together developing team-building skills, as well as encouraging creative thinking skills as a problem-solving tool while enhancing their knowledge of science.
- Recognize students and teachers for exemplary work.

Guidelines for Participation:

- Participants must be in grades 5 – 8.
- Teams must attend school in Brevard, Lake, Marion, Orange, Osceola, Polk, Seminole, Sumter or Volusia counties.
- Teams must be registered by their science or classroom teacher.
- Teams should have no more than five (5) members.
- All entries must include movable parts and an energy source.
- Participants may use found or donated objects. Items purchased may not exceed $100. Keep in mind that more points will be awarded for creative use of found objects. (Include copies of receipts for purchases with project entry.)
- Sculptures entered for competition cannot be larger than **3'W** X **6'L** X **8'H.**
  - * Exceptions may be permitted with prior approval. For approval, contact the Orlando Science Center at 407.514.2112 or email *competitions@osc.org*.
- Sculptures should be named with a permanently attached label.

- ***The proposed energy source must be submitted in writing, along with the application, by fax to 407.514.2067 or email to competitions@osc.org for approval by the OSC Competitions Committee by February 5th, 2014 and should not be changed after that***.
- A teacher/classroom may have multiple teams.
- Multiple year entries are acceptable. During the presentation to judges, the students must be prepared to speak about the sculpture and their reasons for implementation.

Judging Criteria/Rules:

- Student participants must give an oral presentation explaining the science and energy principles included in the project. This presentation is not to exceed five (5) minutes.
- Each sculpture will be allowed three (3) attempts; Sculptures must work all the way through at least once to be considered for an award.
- Complexity of motion
- Creative choice of power source
- Innovation and originality
- Artistic Expression

Prohibited Items – The following items are absolutely prohibited for use in the competition.

- Balloons
- Uncontained Chemical Reactions (ie. Baking Soda/Vinegar; Mentos/Soda)
- Animals (Unless approved with signed release waiver)

Awards:

- Best in Fair - $500 for their science classroom and a trophy in each division
- Most Scientific & Most Artistic - $250 for the classroom and a trophy in each division

Program Timeline:

- **January 31, 2014**: Registration deadline
  - Submit application with energy source for approval

- **February 15, 2014**: Event Schedule

• 8:00am – 9:00am:	Check-in	Lobby, Level 2
• 8:00am – 9:30am:	Sculpture set-up	Project Areas
• 9:30am – 10:00am:	Safety inspections	Project Areas
• 10:00am – 12:00pm:	Project judging	Project Areas
• 12:00pm – 1:00pm:	Lunch - Pizza provided for students	
• 1:00pm:	Awards ceremony	CineDome, Level 1

Each participant will receive a wristband for themselves and one extra for a parent or chaperone as admission to the Orlando Science Center.
Other guests may visit the Admissions Desk to acquire wristbands.

ORLANDO SCIENCE CENTER
777 E. Princeton St. Orlando, FL 32803 • www.osc.org