Egg Drop Project 2011

Objective:

Wisconsin Dells is looking for a new thrill ride after a tragic accident this past summer. They would like a new and safer free fall ride. The support structure for the ride has already been built and all that is needed is the "Catching" part of the ride. Your goal is to design a catching device that will safely catch a person from a 100 ft free fall.

The cost of using the actual building materials is too great so your design team has been hired to build a working model of your catching device with building materials that have similar properties as the actual materials. A large egg will be used to simulate the human. Your goal is to design a catching device that will keep the egg from cracking when dropped from the ceiling in the room.

Design Parameters

- The ceiling is 8 feet high and will simulate the 140 ft height of the ride.
- The device must attach to the ceiling at the 4 support points.
- The device must allow for a 100 foot free fall which is 18" from the floor.
- The device must not be supported from the ground before the drop.
- The egg cannot make contact with the ground during the drop.
- The egg survives if it is not damaged in any manner after the fall and catch.

Building Materials

- No restrictions.
- Keep a list of the materials used for your design

Scoring (50 points for drop)

A – Egg survives the fall from the ceiling intact
B – Egg almost survives the fall from the ceiling
C – Catcher design completed (35 pts)

Daily Journal (2 pts ea) and Project Report (20 pts)

Create a webpage linked on your website that includes a daily journal for each day of the project and a online news article about your design. Your article must include the following: Headline, Design Process, Successes/Failures, Results, Pictures/Video, Physics concepts, Lesson Learned for future builders, Conclusions. Make sure and consider the scientific method when discussing your design process. Make sure to be CREATIVE!

Timeline

Feb 17th – Project introduction, group choices (3-4) and begin design process. 1st Journal entry due
Feb 21st ,22nd – Design and testing, 2nd journal and 3rd journal entry due
Feb 23rd – Drop day, 4th
Feb 28th – Web page project report due