

# THE GREAT PUMPKIN DROP

SOLANA BEACH SCHOOL DISTRICT  
SCIENCE - TECHNOLOGY - RESEARCH - ENGINEERING - ARTS - MATH



Gravitational Potential Energy  
 $P.E. = m \times g \times h$   
m : mass  
g : Gravitational Acceleration (9.8 m/s<sup>2</sup>)  
h : Height  
Buzzle.com

Save the date, Monday October 31st, 2016.  
Solana Highlands Elementary Pumpkin Drops start at 2:50pm

## DESIGN GOAL ENGINEER A SAFE LANDING



The goal of the pumpkin drop competition is to design an enclosure or apparatus to protect a pumpkin from damage when dropped from the second floor of the Solana Highlands amphitheater (approximately 2 stories or 30 feet). Entry is free. Winning entries will be chosen based on most innovative design. All surviving pumpkins will receive free coupon for a Rubio's taco and each entry will receive a prize.

- Rules:
- o Pumpkin must be at least 8 inches in diameter or larger and must be orange in color.
  - o Pumpkin and protective structure weight is limited to 40 pounds.
  - o The inside of the pumpkin may not be altered (no freezing, hollowing or adding chemicals).
  - o Pumpkin enclosure must free fall (no bungee cords).
  - o Pumpkins will be dropped by a CDC Staff member, all participants and spectators can watch near the drop zone.
- Drop order will be assigned by choice upon check-in.
- o No hard materials (which include but are not limited to wood, metal, PVC pipe, or glass) is allowed; however, soft garbage cans are acceptable.
  - o No liquids are allowed.
  - o No Electrical sources are allowed.
  - o Package must be designed so that the pumpkin can be removed by the ground crew within 30 seconds after hitting the ground.
  - o Protective structure around the pumpkin must be designed so that it does not cause any damage to SOLANA HIGHLANDS elementary property.
  - o Any entries that employ a parachute must be designed so that the parachute is dropped at the same time as the pumpkin not prior or after.
  - o Please keep the safety of participants & observers in mind at all times.
  - o The judges will have final say on whether entries are viewed as safe to be dropped. Judges will disqualify entries with heavy, sharp, or protruding parts. These decisions are final.
  - o Someone from the entry team must be present at the pumpkin drop to claim prizes.
  - o Materials will not be returned. Items will be disposed of by event staff only. No participants are permitted in the drop zone.