

# STEAM League Challenge

## GR 6-12 : THE CHALLENGE

To design a device to mimic a situation where impact protection is necessary. In order to explore this, your challenge is to design an enclosure or apparatus to protect a pumpkin from damage when dropped from a height of at least 4m on to a hard surface.



### Possible GR 6-12 Curriculum Outcomes

- Initiate, plan, perform and record an investigation
- Collecting and analyzing qualitative and quantitative data to assess possible explanations
- Work as a member of a team in addressing problems
- Motion
- Momentum
- Procedural writing
- MSTE outcomes
- ...

*\*Proof for points for device and pumpkin condition can be in the form of video or pictures. Proof for points for the design process can be in the form of video, pictures, or journal.*

### Guidelines:

- ◆ Drop height must be at least 4m
- ◆ All safety precautions must be taken in designing, testing and completing challenge
- ◆ Drop surface must be hard
- ◆ Pumpkin must be 6-10lbs

### Points:

- ◆ Device is a safe, original, design (not purchased protective equipment) and does not have a 'parachute'
- ◆ Pumpkin shows little to no damage after drop
- ◆ List of curriculum outcomes met
- ◆ See Submission form for more details
- ◆ BONUS:
  - Evidence of Design Process
  - Use of an electronic device to collect impact data

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