

Egg Drop Project

Our first project will help you to learn about collisions and impacts. The goal is to create a device that will keep an egg from breaking. This is our first quarter physics project, the Egg Drop! You (and a partner, if you choose) will get to build a device to hold an egg that has been dropped from the roof of the school (approx 8-9 m high). Hopefully, the egg will survive the impact.

Warning!!! Warning!!! Warning!!!

You may not test your device prior to the day of dropping! Do not climb buildings, lose your balance, and fall off, breaking your arm or worse!!! This means you!!!

Requirements

- Your device may be no more than 15 cm wide in any dimension.
- We will supply the eggs.
- Your device must have a hatch that opens and closes so that the egg can be loaded in during class.
- Your device must be loaded in the presence of Mr. Murray & Mrs. Linden
- It can take no longer than 30 seconds to load your egg.
- The device must freefall(that is , it must hit the ground at the same time as a golf ball dropped next to it)
- Originality and Creativity counts toward your score.
- Your device may not contain any glass or other materials likely to shatter or injure any spectators.
- The egg must survive unbroken and uncracked until it comes to rest. (Bouncing out of your device and on to the pavement is NOT counted as a success.)

Calculations

- We will calculate the height of the drop site; that is, the distance the egg falls, after measuring the time it takes to fall.
- We'll mass the eggs before we go out to drop them.
- You will need to observe (and estimate, if necessary) the distance your egg moves from when it hits your device until it stops.
- From this initial data we will complete our calculations. The calculations for this lab will be due at a later date.

Egg Drop Project Grading Rubric			
Grade letter range depends on how many boxes you can check. A – 4 boxes, B-3 boxes, C-2 boxes, D- 1 box, F – 0 boxes			
Requirement	Description of expectations and point values		Check
Effort	Creativity (5 points)	Originality (5 points)	
Conditions	Meets size parameters (5 points)	Loaded in time (5 points)	
Fairness	Almost Freefalls (Hits the ground at the same moment as a golf ball dropped at the exact same time)		
Success	Egg did not crack or break		