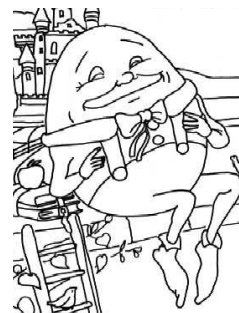


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# The Great Egg Drop of 2009

## The back story:

Huevos Rancheros Batman! The Penguin has hatched an eggs-tremely evil plan to destroy all of the world's chicken eggs. You are part of Batman's research and development team and will be working individually or with ONE other person to create a secure vehicle to protect a raw egg from a vertical drop of approximately 8 meters. Save your egg and put the Penguin in a fowl mood.



**Dates:** Thursday November 12 (per. 1/3/5) and Friday November 13 (per. 2/4/6)

## Requirements:

- All egg drop projects must be entirely designed and built by current LCCHS students enrolled in physics. ***Parents may only provide encouragement, a place to work on the project and help gathering materials. For parents who wish to build an egg drop design of their own we have included a parent category this year (see below for details).***
- Your device must be made of just CARDBOARD and TAPE.
- Your device must fit through a 15cm by 15cm square hole and be no longer than 50 centimeters. In other words, the starting dimensions are (15cm x 15cm x 50cm).
- The device must be capable of being egg-loaded at school (teachers provide the eggs).
- The egg must be partially visible once loaded into the device.
- Your device must not weigh more than one kilogram (2.2 lbs).
- No adhesive side of tape should be touching the egg.
- The egg must land in the "target zone" measuring 3 meters by three meters square.
- Once dropped, the egg must be removed from the device and be handed intact to the event judge.
- A cracked egg is a broken egg.
- Successfully protected eggs land in the target zone and have no cracks.

## Drawing and Calculations:

- On the day of the drop you must bring a sketch of your device, indicating the key features that will help it survive.
- We will measure the height of the drop site; that is, the distance the device falls.
- We'll mass the eggs before we go out and drop things.
- You will need to estimate the distance your egg moves within your device when it hits the ground.
- The drawing and your calculations are due at the end of the class period on the day of the drop.

**Parent Category:** Because some parents have an interest in this challenging task and that enthusiasm may prompt them to "help" their students more than is allowed by the rules (or desired by the student) we have created a parent category. Parents who wish to enter the egg drop competition and build their own egg drop vehicle should notify their student's physics teacher by phone or email to let them know they plan to attend. Please RSVP by Tuesday Nov. 10<sup>th</sup>. Parents must attend the drop during the period their student has physics. There is no extra credit awarded to students whose parents complete this project – it's just for fun!!

**Frequently asked questions:** Please check in regularly to the following website to see answers to student questions about this event: <http://teachers.sduhsd.k12.ca.us/bpark/eggdrop2009.html>

Email questions about rules and/or the contest to: [brooks.park@sduhsd.net](mailto:brooks.park@sduhsd.net)

**Grading:** The specifics of grading for this activity will be determined by each teacher.