

Physics Egg Drop Challenge

Objective: To create a containment unit that will keep an egg from breaking or cracking when it is dropped from a second floor window to the courtyard below. (about 6-7 meters.)

Design Parameters:

1. Your design may be of any shape or form you desire, but may not exceed a maximum length of 50 cm along any measured dimension. Otherwise: Snip, Snip, with the Scissors.
2. The **only** materials you may use in your design is standard paper, and masking tape. There can be no glue, paper clips or other materials. You may however decorate your device using NON ADHESIVE markers, chalk, or pencils.
3. Your design must be able to protect a **large sized egg** dropped approximately 6-7 meters. The official dropper will not necessarily hold your design at the top and drop it. It may be held from the bottom or tilted in any orientation for dropping. You will be responsible for cleaning up any mess left by your device, so please test your design prior to the testing day!
4. A large, raw, chicken egg will be supplied on the day of the drop. Each group will have a maximum of 5 minutes to insert the egg and prepare the device for competition. The egg may not be altered in any way.
5. After the drop, the device must be opened and the egg produced within 2 minutes of impact.

Point distribution:

1. The assignment is worth 75 points
 - a. 15 points for a paragraph or two explaining your design and why, according to the laws of physics, you think it is going to work.
 - b. 25 Points for a journal of your building process, test results, and modifications. (Feel free to express emotions, just keep it PG-13.)
 - c. 10 points for making and testing a device.
 - d. 25 points for a successful landing (one in which the egg does not break or crack). 0 points if yolk is seen. 1-10 points for degrees of cracking without any yolk spillage.
2. Bonus points will be awarded for the following successful devices:
 - a. Devices under 35 grams: 1 point.
 - b. Devices under 30 grams: 2 points
 - c. Devices under 25 grams: 4 points
 - d. Devices under 20 grams: 8 points
 - e. Devices under 15 grams 12 points
 - f. Devices under 10 grams 18 points
 - g. Devices under 7 grams 25 points
3. Points will be taken away for the following:
 - a. Too much mass: devices over 70 g receive a 1 point penalty per gram over 70 g.

Good Luck, and don't fowl this up!

