

Name _____ Partner _____ Date _____

II-12 THE ALL-AMERICAN EGG DROP Application

Problem

How can you protect an egg from breaking resulting from the impact of a fall?

Materials

One healthy raw egg, five sheets of typing paper and 1 m of $\frac{3}{4}$ " masking tape or 50 soda straws and 1 m of $\frac{3}{4}$ " masking tape, a plastic sheet to cover the floor.

Procedure

You are to construct a device which will allow a raw egg to fall on a hard surface such as a floor or sidewalk without cracking or breaking. You can choose to enter the paper sheet or soda straw competition. If you enter the paper sheet competition you will have 5 typing sheets of paper to construct your container. In the soda straw competition you will have 50 soda straws. In each case you will have 1 m of $\frac{3}{4}$ " masking tape for fastening purposes.

Construct the device so that the egg can be removed or checked easily to determine whether it has sustained any damage.

Each egg protecting device will be dropped from a height of 1 m. If the egg sustains this fall, then it will be eligible for the 2 m fall. Those surviving will then be dropped from 3 m and so on. The egg surviving the highest fall in each division will be declared the winner. That's no yolk!

Summing Up

You are currently studying a unit on dynamics involving the forces that occur during interactions. In terms of what you have learned thus far, explain what caused the success or failure of the device you constructed.