

## EGG Pendulum

**Objective:** Construct the thinnest possible egg capture device that will keep an egg from breaking when it hits the wall. The egg will be suspended from a pendulum approximately 2.2 meters long. Your goal is to let the egg swing from the greatest possible angle (max angle of 90 degrees).

**Materials:** Each group will get a set of materials that may be used to make their egg catcher. The materials **may** include such items as a large envelope, soda straws, foam plate, masking tape.

**Construction:**

You will have 30 minutes to design and construct your egg catcher. Only the materials provided may be used for your device. You will have a pair of scissors to work with, but cannot use the scissors as part of your device. The egg catcher will be built on a 60 cm x 60 cm board that will be provided to each team.

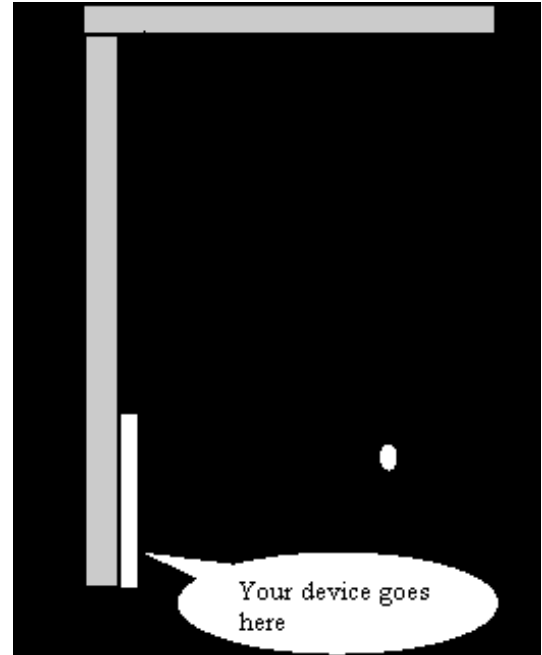
**Dropping the egg:**

All teams will be given TWO drops. Each must decide ahead of time what two angles that will drop from. These angles will be recorded before any team begins dropping. The angles must be multiples of 15 degrees: 15, 30, 45, 60, 75, and finally 90 degrees.

**Scoring:**

Scores will be calculated as follows:

$$\text{Score} = \frac{\text{Maximum successful drop angle (degrees)}}{\text{Thickness of egg catcher (cm)}}$$



The thickness of your egg catcher will be measured from the board to the thickest point of your device.

**Notes: -**

There will be no practice drops.

Each team must drop their egg from both of their angles.

The egg must land without breaking or cracking (including on bounces until the egg comes to rest) for a drop to be successful.

The judges have the final decision on cracks and rules. The spirit, not the letter, of the rules will be enforced.