Engineering Event: **Egg Drop**

Junior Cougar Championship Workshop Day 1

01

What is this event?

Each team will be given a random set of materials and 30 minutes to build a contraption to protect an egg. Yes, these materials can be ANYTHING:

- Rubber bands
- Aluminum foil
- Pipe cleaners
- Toilet paper
- Sponge
- Balloon
- Tape?

After time is up, your build will be dropped from increasing heights:

- 0.5m
- 1m
- 2m
- 3m
- 5m
- And on...

Highest survived height wins! (no breaking or cracks) Ties will be broken by the weight of the build (lighter is better).

Important Restrictions:

The materials each team will be given is **limited**... If you waste anything you won't get a new one.

The egg must be **easily accessible or visible** in the build. If we cannot verify your egg survived, your team will be disqualified.

02

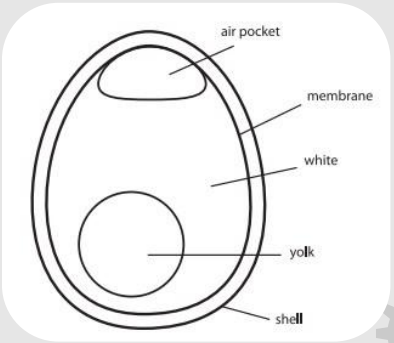
Tips and Strategies

3 Ways to Prevent Breaking:

Slow down the descent speed. A parachute comes to mind, but other options like streamers also work!

Absorb the energy of the impact using cushioning. Bubble wrap and styrofoam come to mind, but many other things can be used as cushioning.

Orient the egg correctly and direct forces away from the shell. The arches of the egg are strongest, but not stressing the shell is even better!



1:38-4:02

Let's practice!

Get into groups of 4-5 people. One group per table.

- 4x sheets of printer paper
- 2x small rectangles of cardboard
- 2x wooden dowels
- 4x pipe cleaners
- 4x straws
- 10x rubber bands
- 1x measuring cup
- 1x propeller
- 2m masking tape
- 20cm string
- 1x plastic egg
- 1x scissors