

PRODYOGIKI '19

EGG DROP CHALLENGE

Engineering activities give participants a chance to develop problem solving and observations skills, to work with interesting and engaging tools and materials, and to learn how to work as a member of a team. In this activity, participants are challenged to protect an egg from breaking after it is dropped from a set height.

General Rules

There will be teams of two or three. Their aim would be to design a contraption to protect their raw egg. The idea of egg drop project is to use as few materials as possible to make the packaging strong enough to withstand the fall.

Materials provided

All the materials required for making the contraption would be provided to the participants on the spot.

These would include straws

- Hay
- Cotton
- Disposable cups
- Masking tape
- Balloons
- Plastic Bags
- Newspaper
- Cardboard
- Threads
- Egg box

Judging Criteria

1. The apparatus must allow for the egg provided to be unbroken and uncracked upon completion of the drop test. Participants will remove the egg from the apparatus and show it to the judge for verification. Only the judge determines whether the egg survived the drop test.

2. The apparatus will be judged based on the following equation, with the highest score winning:

$$\text{SCORE} = \text{Integrity} / (\text{Mass} + \text{Height})$$

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Integrity = 2010 if the egg is not broken; 0 if it is broken

Mass = Mass (in grams) of the container without the egg (must not exceed 250 grams)

Height = Height (in centimeters) of the container's "minimum dimension"