

Name:

Date:

Class:

Naked Egg Drop Rules and Score Sheet

Materials Note: *Prohibited materials* include any food or food ingredient, all powders (sand, flour, baby powder), and pastes and gels that stay wet. Dried glues are allowed. All other materials are permitted.

Construction Rules:

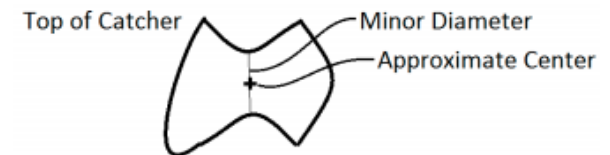
1. Egg catchers must be built by the students with no banned materials. After being turned in, no modifications to the egg catcher are permitted.
2. The egg catcher height may not exceed 25 cm. Measured parallel to the ground, no dimension of the egg catcher may exceed 25 cm.
3. All materials in the egg catcher must be secured to the structure (see Competition Rule 2)

Competition Rules:

1. The drop height is the perpendicular distance from the ground to the egg catcher's highest point.
2. After measuring to that verify catcher dimensions are not too tall or big, judges will invert and shake each egg catcher. Anything that falls out may not be replaced by the judges or student engineers.
3. The eggs are dropped by a student on a ladder, or an egg dropper device, over a tarp on a hard surface.
4. Competitors are responsible for placing the egg catcher and may reposition it between drops.
5. A maximum of three drops are permitted. The first must be from a minimum of 100 cm above the egg catcher. Each additional drop must be at least 30 cm higher than the previous (up to the maximum height of the egg dropper) as selected by the competitors.
6. The highest drop that results in a completely undamaged egg—no chips or cracks, even if the egg is intact—is recorded.

Scoring and Awards:

1. Awards are given for the largest “drop ratio.” *drop ratio = the maximum undamaged egg drop height (cm), divided by the egg catcher height (cm)*
2. In case of a tie, the egg catcher with the smallest “minor diameter” (smallest edge-to-edge measurement through the center) is the winner.



You must thoroughly understand the *rules and scoring* on this page so that you know the *constraints (requirements and limitations)* of the problem well, so you can create a *smart winning design*.

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Egg Drop Score Sheet

Students / Team	Material Check	Dimension Check	Competition Data	Scoring and Awards
1. _____ 2. _____	Permitted materials? yes or no Shake test: secure or loose	Catcher height: _____ Width, length and/or diameter are < 25 cm: yes or no	Drop height 1: _____ Break? yes or no Drop height 2: _____ Break? yes or no Drop height 3: _____ Break? yes or no	Drop ratio: _____ Rank: _____ drop ratio = highest drop height ÷ catcher height
1. _____ 2. _____	Permitted materials? yes or no Shake test: secure or loose	Catcher height: _____ Width, length and/or diameter are < 25 cm: yes or no	Drop height 1: _____ Break? yes or no Drop height 2: _____ Break? yes or no Drop height 3: _____ Break? yes or no	Drop ratio: _____ Rank: _____ drop ratio = highest drop height ÷ catcher height
1. _____ 2. _____	Permitted materials? yes or no Shake test: secure or loose	Catcher height: _____ Width, length and/or diameter are < 25 cm: Yes or no	Drop height 1: _____ Break? yes or no Drop height 2: _____ Break? yes or no Drop height 3: _____ Break? yes or no	Drop ratio: _____ Rank: _____ drop ratio = highest drop height ÷ catcher height
1. _____ 2. _____	Permitted materials? yes or no Shake test: secure or loose	Catcher height: _____ Width, length and/or diameter are < 25 cm: yes or no	Drop height 1: _____ Break? yes or no Drop height 2: _____ Break? yes or no Drop height 3: _____ Break? yes or no	Drop ratio: _____ Rank: _____ drop ratio = highest drop height ÷ catcher height