

Egg Drop Activity

The “Yolks on You” egg company has had problems with broken eggs when transporting them from the farm to the store. Your team has been hired to solve this problem by designing and constructing a cargo crate to protect a raw egg from breaking when the crate is dropped from a height of 3 meters.

1. Teams may purchase all or part of the following materials using their **\$1,000** budget:

- String - \$100 per meter
- 8 x 11” paper - \$100 each
- straight straws - \$20 each
- flex straws - \$20 each
- popsicle sticks - \$20 each
- masking tape - \$100 per meter
- cotton balls - \$50 each
- small paper dixie cups - \$100 each
- rubber bands - \$20 each

Lab Write-Up - Part I

You will be evaluated on your lab write-up.

Developing ideas

- a. **Problem (Rubric B-i):** Explain the problem that the Yolks on You Company has.
- b. **Research (Rubric B-ii):** What choices did your group come up with? Sketch your design in the top left of a paper divided into fourths. Sketch your partners’ designs in the other squares.
 - i. On a separate sheet of paper, draw your chosen design. Make sure you and your group all draw the same design. Color-code and label any materials or key features. Show the design from multiple perspectives.
- c. **Hypothesis (Rubric B-iii):** What design did your group choose and why? What do you expect specific parts of your design to do? How will they protect the egg?
- d. **Investigation (Rubric B-iv):** Describe how the devices are dropped. What data was collected. Describe three successful devices. How did those devices work? What design features led to their success?