MATERIALS

10 household items that can be used to create the device are:

1. Four cotton balls
2. Two straws
3. Four rubber bands
4. 1 balloon
5. Twelve inches of tape
6. Two sheets of paper towel
7. One cup (paper/styrofoam/plastic)
8. One plastic bag
9. Two sheets of paper
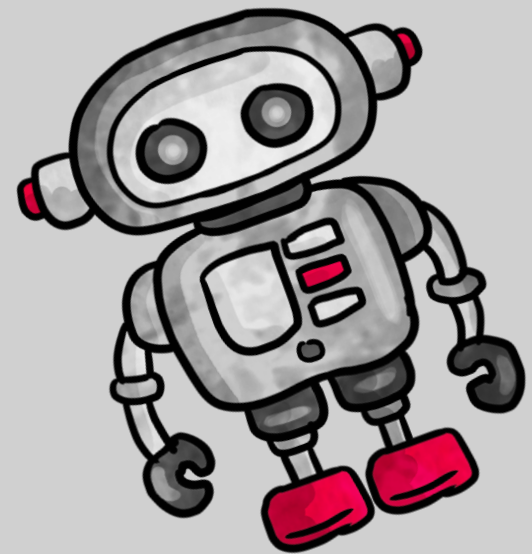10. Ten paperclips

IT'S NOT
MAGIC
IT'S
SCIENCE
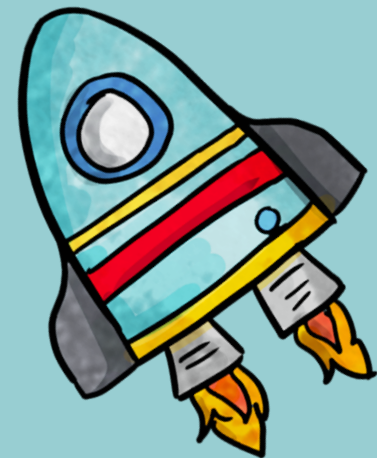
INTRO

Your Mission is to design and build a device that can protect an egg from breaking or cracking when dropped from various heights, using a limited set of materials and adhering to specific rules. You will be able to submit 3 different designs.

IT'S NOT MAGIC IT'S SCIENCE

TESTING

You will begin testing from a 1 foot drop height. The entire device must be above the specified drop height. After the device has been dropped, carefully inspect the egg to determine whether it has cracked or broken. For each successful drop, increase the height by 1 foot and repeat until the egg is cracked or broken (max 10 ft). Repeat the testing process for each round.

OBSERVE

Every round you will make engineering adjustments to your design. Make sure to record observations on what elements of your design were successful/unsuccessful and why. Document the changes you make between each round and the results they produced.

SUBMISSION

You will submit the results of each round of drops including a short video clip (10-20s) of the final drop each round. You will also submit a 1-3 paragraph description of your original design and observations of how your design changes each round impacted results.

SCORING

You will be scored on the following:

<u>Drop Height</u> receiving one point for each successful drop. (Max 10 per design for a total of 30 possible points)

<u>Design Observations</u> you will be scored on a scale of 1-10 for your design description & observations. This score will have a 3x weight for a total of 30 possible points.

A total of 60 points are possible.