

Using Friction (to drop an egg)

Summary

Students will create an egg drop device where they try to slow down an egg using only friction (air resistance).

Time Frame

3 class periods of 60 minutes each

Group Size

Small Groups

Materials

Anything that the students can find at home. I try to encourage them not to go buy anything but to only use items that they find around their house.

Background for Teachers

This can be used as an introduction to friction or as a post lab to show what the kids have learned about friction. If using as a post assessment students should know what friction is and its affects on objects. You could also talk about gravity before this activity.

Time needed: 30 min the first day and 2 -- 50 min periods.

Instructional Procedures

Day 1

:

Divide the students into groups of 2-3. Give each group a blank piece of paper.

Allow the students time to draw out their idea for a device and list the materials they need in order to build it. Have the students point out on the drawing how the device will be controlled by friction from the air.

Make sure each student knows what he or she must bring to the next class period. (I like to do this by checking their planners as they leave the classroom)

Day 2:

Allow the students time to build their devices.

Day 3:

Drop devices from roof. While devices are being dropped they should be timed to see whose goes the slowest. Times can be recorded in the data sheet below.

Warning: Make sure that either you provide the eggs and collect all unbroken ones at the end or have the students give their eggs to you at the beginning of the day and then collect them again at the end. There have been instances where eggs were broken in lockers. If I do not get all the unbroken eggs the group loses points.

Assessment Plan

Scoring guide

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1. Student participates and contributes to the activity.....10
2. Student's egg does not break.....5
3. Student correctly answers analysis questions.....10

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)