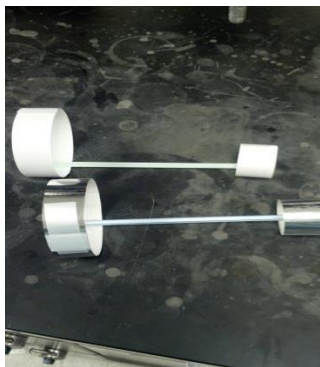




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## The Incredible Hoop Glider



### Standards:

8<sup>th</sup> :

1. a, b, c, d, e & f; The velocity of an object is the rate of change of its position.
2. a, b, c, d, e & f; Unbalanced forces cause changes in velocity.

### Introduction:

*Have you ever made a paper airplane? What was the best design for your plane? Today we are going to learn how to make an unusual looking glider.*

### Materials:

- A regular drinking straw
- 3x5 inch index card or stiff paper
- Tape
- Scissors

### Safety:

- Always have an adult with you to help you during your experiment.

**Procedure:**

1. Cut the index card or stiff paper into 3 separate pieces that measure 1 inch (2.5 cm) by 5 inches (13 cm).
2. Take 2 of the pieces of paper and tape them together into a hoop. Be sure to overlap the pieces about half an inch (1 cm) so that they keep a nice round shape once taped.
3. Use the last strip of paper to make a smaller hoop, overlapping the edges a bit like before.
4. Tape the paper loops to the ends of the straw so that the straw is on the inside of the loop. It should look somewhat like the picture below.
5. The hoop glider is now ready to go. Hold it with the hoops up and grab in the middle like a dart with the front smaller hoop pointed slightly up then throw.

**Data and Observations:**

Record your observations in this space

What did you see? Anything you were not expecting? Describe it here.

**Questions:**

1. Does the placement of the hoops on the straw affect its flight distance?
2. Does the length of straw affect flight? ( you can cut the straws or attach straws together to test this)
3. Do more hoops help the glider to fly better?

4. Do the hoops have to be lined up in order for the plane to fly well?

**References:**

1. Sciencebob.com

[http://www.sciencebob.com/experiments/straw\\_hoop\\_plane.php](http://www.sciencebob.com/experiments/straw_hoop_plane.php)

(Accessed July 23, 2012).