## How Far A Paper AirPlane Can Travel

Aim: To investigate and compare two different types of paper airplane, and how far they can travel and how long the paper air plain can stay in the air.

Hypothesis: The paper airplane will travel 67 cm and will stay in the air for 35 seconds.

Apparatus:

| A4 peace of paper | x 2 |
| :---: | :--- |
| Smooth flat table | x 1 |
| 30 cm ruler | x 1 |
| Pen | x 1 |
| Paper | x 1 |
| 20 m measuring tape | x 1 |
| Stop watch | x 1 |

Method to create paper airplane:
Step 1: Grab two A4 peaces of sheet
Step 2: Started to fold your peace of paper in half
Step 3: Then fold the two corner toward the folded line

Step 4: Fold each sides in half
Step 5: For plane B fold each side again

Method:
Step 1: Throw paper airplane and start stop watch
Step 2: Wait until paper airplane stop and stop stopwatch
Step 3: Record distance and seconds
Step 4: Repeat another four time for plane A and plane B
Risk Assessment: One, paper cut, to prevent this wear rubber gloves. Two, getting poke by the paper airplane in the eyes, wear safety glass. Three, getting cut by the scissor during the creation of the paper airplane, cut with caution. Four, Avoiding the table from falling on you feet. To prevent this, provide a stable area with lots of room around the table so you won't bump into the table or run into the table.

Results: Centimeter (cm) and Seconds (sec)

| Paper <br> Air Plan <br> A | Dis- <br> tance <br> $(\mathrm{cm})$ | Length <br> In Air <br> (Second) | Paper <br> Air Plan <br> B | Distance <br> $(\mathrm{cm})$ | Length <br> In Air <br> (Second) |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Test One | 59 cm | 2 sec | Test <br> One | 71 cm | 3 sec |
| Test <br> Two | 102 cm | 2 sec | Test <br> Two | 107 cm | 2 sec |
| Test <br> Three | 65 cms | 1 and a <br> half sec | Test <br> Three | 110 cm | 2 sec |
| Test <br> Four | 71 cm | 3 sec | Test <br> Four | 133 cm | 3 sec |
| Test <br> Five | 73 cm | 3 sec | Test <br> Five | 122 cm | 3 sec |

Remember Plane B has more folds than Plane A 3672

Discussion: Durning the the experiment, Pain B went better than Plane. This shows that having for folds is better than have four or five folds. The hypothesis is kind of right and wrong a the same time. One, the paper air plain travel around 67 cm . In the results the closes test was 65 cm . Also the hypothesis says that the paper air plain will stay in the air for 35 seconds. This was an incorrect. The result show to travel 65 centimetre it take one and a half seconds. Some problems that was encounter was a paper cut, obstacle interfering the experiment and the wind direction interfering with the results. Some ways that the data could be improve is to do the test an extra
five times to insure the result were correct. Some errors that were made were recording the length but not the seconds. The science that is involved are aerodynamic, weight and mass, structure and The finding will benefit society by implying the law of "The Laws of Aerodynamics". Also knowing that a paper airplane with MORE folds fly feather, this tells society that a pain which is more aerodynamic will last longer and use less fuels.

Conclusion:It is not sure through my result that the hypothesis is correct or incorrect. It is possible to see the cause (two different types paper airplane with two different type of design) and effect (which airplane went the furthers and the longest).

## Bibliographer: <br> http://answers.yahoo.com/question/index? <br> qid $=20081019033705 \mathrm{AA} 21 \mathrm{ffW}$

http://www.sciencebuddies.org/blog/2010/02/a-strong -hypothesis.php

