

# Which paper plane model flies the furthest?

## Aim:

Our aim is to find which of these five models fly the furthest.

## Hypotheses

We predict that the dart will win because it is really aerodynamic. The world record holder is only good if folded to perfection and thrown in a specific way.

We predict that the simple plane will fly the least distance because of its simple construction.

We predict that the acrobat will not do well because it is designed to fly in a interesting way, not to fly far.

We will mark where it lands as it may slide on the ground after the plane nose hits the ground.

## Control

The size of the paper in the planes will be A4 so that the planes will be the same weight and similar sizes

## Way of measuring the data

We measured the data by flying each plane 5 times after waiting for the wind to slow down. Then we would measure how far it went using measuring tape

## Materials

Classic: The classic paper plane  
Simple: Like the classic but with less folds

Dart: Like the classic but with more folds

Acrobat: A plane designed to look cool when it flies

World record holder: The plane that holds the world record  
Below: The image of the planes

## Limitations

There is the problem of the fact that you cannot throw with your hand sufficiently and accurately without making one have more power than another.  
We couldn't find a big enough indoor space., so we had to do it outside where there is wind.

## Recommendations for making these planes:

- If you are very good at folding planes, go with the world record holder, it can be very good if it is folded right.
- If you want to have a simple plane that flies far, go with the classic.
- If you are a strong thrower, go with the dart because it gets the furthest without gliding.
- If you just want a plane that looks cool when it flies, go with the acrobat.

Winner:

Classic!!!



## Method

1. Throw each plane five times.
  2. Measure the distance for each plane landing.
- record data and determine the mean, median and furthest.

## Results

The results were similar to what we expected, but there were some big differences. First the dart didn't do very well, this was because it can't glide unlike the others. Second we found that the world record holder did surprisingly well. We think that this is because even if we make some mistakes folding it, it is still overall good. Lastly, the classic did the best. we think this is because it is good at gliding so it can travel a lot further. The world record holder still beat it in the single longest distance, but that is probably chance from the wind

## Discussion

- The means were always more than the medians, we think this is because the planes would have one or two very good lengths, but the rest were small.
- A lot of the planes have a highest distance that is a lot higher than the average, we think this is because there was probably more wind on that throw.
- Overall, the acrobat did better than the simple, this is probably because the acrobat is good at gliding so it would have some bad ones but the other throws would be good, and the simple just would do all similar flights.

## Conclusion:

Our conclusion is that the classic has the best average because of reliability. The world record holder has the best distance because it can fly far but not reliably.

Our hypotheses predicted that simple and acrobat would do badly but the dart didn't fly far as we expected. The conditions outside may have affected its performance.

Folding accurately for the world record holder assisted its results.

