



## PAPER AIRPLANES

Fold a paper airplane and then bend a corner to see how that changes its flight path.

### Materials

Paper (any kind)



### Results

The paper plane with the wingtips flew further!

### Procedure

- Fold the piece of paper in half long-ways and then unfold it.
- Fold both top corners in towards the fold line to make a point at one end.
- Fold the bottom corner of the triangle you just created in towards the center line to make a finer point.
- Fold the paper in half again along the center line.
- Fold the wings down.
- Fly your paper airplane a few times to get an idea about how far it tends to fly.
- Fold the tips of the wings up so that they form a 90-degree angle with the rest of the wing.
- Try to fly the plane again. What happens?

### Why?

Wingtips reduce drag, or the backward force against the forward-moving plane, by altering the way the air flows around the wings. Under the wings of a flying airplane, there is an area of high-pressure air pushing the plane up. The area on top of the wings is lower pressure air than what is below the wings. High-pressure air from the under side of the wing can escape over the tips of the wing to the area of low pressure and create drag. Adding tips to the wings of a plane helps to prevent the high-pressure air from escaping to the top of the wing, reducing drag.