

## Our observations

A paper airplane with more mass flies faster and farther than a paper paper plane with less mass, unless the mass is too great that the wings can't hold the plane in the air.

So for a stable flight, the best place to put weight (e.g. by attaching paperclips) is in the middle of the airplane! For example, if you move the paperclips to the front of the plane, the centre of gravity moves in front of the centre of lift. Then, the weight will pull the front of the plane down.

## Some more details for the older students

The distance travelled by the airplane also depends on the air resistance. Imagine you are in a driving car. If you take out your hand from the window you will feel something pushing your hand backwards. This something is called air resistance. A large hand will experience a larger air resistance. So, the larger the wings the larger the air resistance. The smaller the wing size the farther away the airplane will move as there will be less air resistance to push it back from moving forward.

Did you take note of any other observations when you were flying the four paper planes you made?