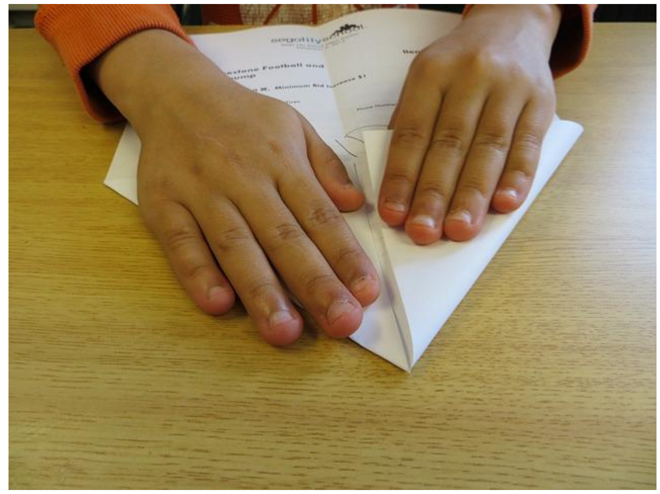
Which Paper Airplane Works Best?

In this experiment you will learn to build your own wind tunnel and test various models/types of paper airplanes.

WIND TUNNEL MATERIALS NEEDED:

*A piece of furnace pipe about 4 feet long
*A piece of pliofilm, acetate, or some other transparent material
*Separations from an egg carton or similar separators
*Scotch tape
*A corrugated box, the same size as the egg-carton separators
*A small electrical fan
*Book-binding tape or similar adhesive tape
*2 small hooks with screw ends, the kind used for hanging cups
*Metal shears



MATERIALS FOR PAPER AIRPLANES:

*Plans for different kinds of paper airplanes, paper

EXPERIMENT PROCESS:

*Using the procedure outlined on the following website, create a wind tunnel: http://www.fi.edu/flight/first/makesimple/index.html

*Construct a number of different models of paper airplane. You can vary these in a number of ways: By design (different ways of folding the paper) By weight (add pennies to different parts of the airplane) or even by using different weights of paper.
*Suspend each paper airplane in the wind tunnel and turn on the fan.
*Time how long it takes for the airplane to sink to the bottom.

Variation: Try changing the fan speed (if possible). How does this alter the results?