

AIRFOIL EXPERIMENT

Equipment:

- Strip of notebook paper or newspaper, about 5cm wide and 25cm long
- Book
- Paper clips

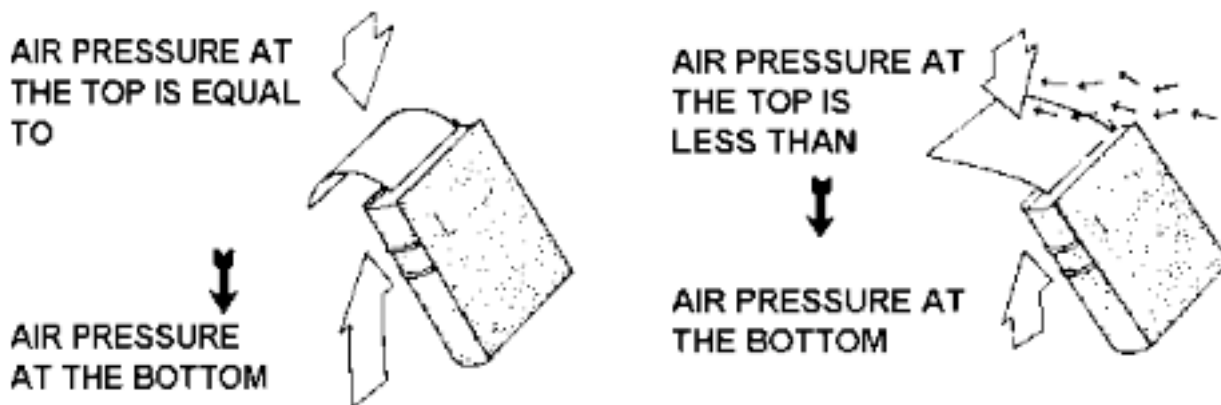
The force that lifts an airplane and holds it up comes in part from the air that flows swiftly over and under its wings.

Make an airfoil (wing) by placing one end of the strip of paper between the pages of the book so that the other end hangs over the top as shown in diagram A. Move the book swiftly through the air, or blow across the top of the strip of paper. It flutters upward.

Hold the book in the breeze of an electric fan so the air blows over the top of the paper.

Take the strip of paper out of the book. Grasp one end of the paper and set it against your chin, just below your mouth. Hold it in place with your thumb and blow over the top of the strip. The paper rises. Try the same thing after you have fastened a paper clip on the end of the strip. See how many paperclips you can lift in this way.

It doesn't matter whether you move the air over the strip of paper by blowing or whether you move the paper rapidly through the air - either way it rises.



Bernoulli's principle states that an increase in the velocity of any fluid is always accompanied by a decrease in pressure. Air is a fluid. If you can cause the air to move rapidly on one side of a surface, the pressure on that side of the surface is less than that on its other side.

