

# Bernoulli's Law 1

Demonstrate Bernoulli's Law by doing a simple experiment.

## Difficulty / Time Commitment:

1 out of 10

## Coolness Factor:

5 out of 10

## Materials:

- piece of paper
- book of any type

## Instructions:

1. Insert the piece of paper into pages of the book, leaving most of the piece of paper sticking out.
2. Blow across the top of the piece of paper, and the paper actually rises.

## What Happened?

The piece of paper actually rose even though we were blowing down on it. This occurred because of Bernoulli's Effects. Bernoulli's Law states that fast-moving air has lower pressure than slow-moving air. The air was moving faster over the top of the paper (that's where we blew), so there was relatively low pressure on the top side of the paper and high pressure on the bottom side of the paper. Since air moves from high to low pressure, the piece of paper is pushed upward. This is the same principle that keeps airplanes aloft, and also the reason that airflow is generally higher over mountains, thereby increasing lift.

## Basic Concepts Learned:

- Bernoulli's Law states that fast-moving air has higher pressure than slow-moving air.
- Bernoulli's Law is why airplanes stay aloft, coupled with the fact that air moves from high to low pressure.
- Without Bernoulli Effects, airplanes could not stay aloft for long periods of time.