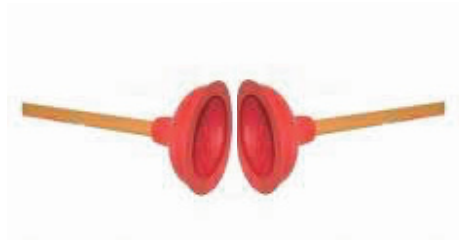


How Heavy is Air?

Learn about air pressure

Equipment

- ◇ Two plungers



Method

1. Get 2 people to put the 2 plungers together. Pulling them apart is easy.
2. Now get them to push the plungers together, forcing the air out. Without twisting the plungers try to pull them apart. It is impossible!

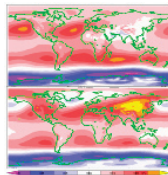
As there is little air left between the plungers, the pressure of air on the outside is much greater than the pressure inside, so they are hard to pull apart. We don't normally feel the weight of the air because it pushes on us in all directions.

(To free the plungers, peel the rubber of one back a bit)

How does this relate to the Atmosphere?

The large scale circulation of the atmosphere and oceans, and smaller scale weather systems, are all driven by pressure differences. Air, and water, will always tend to move from areas of high pressure to areas of lower pressure.

At any one time the pressure at sea level may vary around the world from as little as 870mb (inside a hurricane) to 1083.8mb (recorded in Siberia, 31st December 1968).



Where can I find more information?

For more experiments investigating air pressure, have a look at the egg in a bottle, marshmallows in a bottle, crumple can and candle and water trick at:

<http://www.metlink.org/weather-climate-resources-teachers/experiments-and-demonstrations.html>

For more information on barometers please see here:

<http://www.barometerworld.co.uk/News.htm>

www.rmets.org/experiments