SECONDARY LEVEL

The Power of Pressure

In keeping with the theme of Science Week 2014, here are some activities to demonstrate the "power" of air pressure.

SCIENCE WEEK
9-16 NOVEMBER 2014

THE POWER OF SCIENCE

CAN YOU DO THE CAN FLIP?

YOU WILL NEED

Two mugs or lab beakers, an aluminium fizzy can, (it may take trial and error to find the right sized can and mug), patience, a drinking straw (optional), a hairdryer (optional).

BASIC INSTRUCTIONS

Feel free to experiment!

1. Empty the can!
2. Place the empty can in one of the mugs.
3. Line up the other mug alongside.
4. Blow out gently into the space between the can and the wall of the mug.
5. Repeat until you can flip the can so it lands upside down in the other mug.
6. (Prepare to amaze your family with your new party trick!).

INVESTIGATE

- Does it matter which way the can faces before you start?
- Is it better to leave a lot or a little space between the can and the mug?
- Can you control the distance and direction taken by the can as it flips?
- What happens if you use a straw to blow the air into the space?
- What happens if you blast it with air from a hair dryer?
- Would it work with an empty "tin" can?

WHAT IS HAPPENING?

This is an example of the *Bernoulli's Principal* in action - it is a change of air pressure that allows the can to lift, and it is also what makes it possible for airplanes (also made of aluminium) to fly.

EXPLORE MORE...

Interactive animation on the dynamics of pressure:
http://phet.colorado.edu/en/simulation/fluid-pressure-and-flow