

The Empty Bottle?

This could well be the simplest science experiment that I've ever shared. Don't let that put you off - it's really cool and all you need is a sheet of paper and an empty drinks bottle. Let's do this!

What do I need:

- A plastic bottle
- A sheet of paper

How do I do it?

STEP 1 - Tear off a small piece of paper and scrunch it up into a ball so that it fits in the mouth of your bottle!

STEP 2 - Lay your bottle on its side and put the scrunched up piece of paper into the mouth of the bottle, as shown!

STEP 3 - Here's where it gets fun! Challenge a friend to blow the piece of paper into the bottle (maybe place a sporting bet on it if you want to profit from science!). Try it - the piece of paper will come flying out!



What's going on?

This is all to do with Bernoulli's principle - he's one of those scientists that everyone's heard of but by no means everyone can remember what he said!

Bernoulli noticed that air has a lower pressure when it's moving more quickly. As you blow into the mouth of the bottle the air is moving fastest - so is at the lowest pressure. Inside the bottle the air is moving more slowly - so a higher pressure. As the pressure is higher inside the bottle than in the mouth this pushes the paper out!

More Fun Please - Experiment like a real scientist!

- What happens if you don't use a piece of paper? What else could you try instead?
- Is it possible? How can you blow the paper in?
- How does using different shapes and sizes of bottle change the experiment?

