

Hairdryer & Ping Pong Ball Experiment!

Next time you're about to dry your hair go and grab a ping pong ball and give this little science experiment a go! It'll only take a couple of secs to do it but it's sure to get everyone thinking about science for the rest of the day!

What do I need:

- A hairdryer
- A ping pong ball

How do I do it?

STEP 1 - This one's nice and simple! Pop your ping pong ball into the middle of your hairdryer and turn it on!

STEP 2 - No surprise, your ping pong ball flies up into the air!

STEP 3 - Here's where things get interesting! Start to twist the hairdryer to the side slowly and smoothly. You should be able to twist it all the way to a 45 degree angle before the ping pong ball will fall! (as shown)



What's going on?

In the first case this is a great demonstration of Newton's laws. The air from the hairdryer pushes up, the gravity from planet Earth pulls down and the ball sits at the point where those two forces are equal!

The second part is what shocks most people! As you twist the hairdryer over to its side how come the ball doesn't fall? That all comes down to Bernoulli! The air forms a stream around the ball and as you twist the hairdryer over you may well notice the ball start to spin - that's because of its position in the airstream.

(This is the same effect that you see when football players curl free kicks, the spinning of the ball and the change of airflow caused the ball to swerve to the side)



More Fun Please - Experiment like a real scientist!

- Does it have to be a ping pong ball? What else could you use?
- Try drawing dots on the ball so you can see how much it spins.
- What's the maximum angle you can twist the hairdryer to before the ball falls?

