

# DISCOVERING BERNOULLI'S PRINCIPLE

Discover how air pressure and airflow can work together to make a ping pong ball float in mid-air with just the power of a hairdryer!

## INSTRUCTIONS:

**STEP 1:** Set up the hairdryer: Plug it in and point it upward at a slight angle.

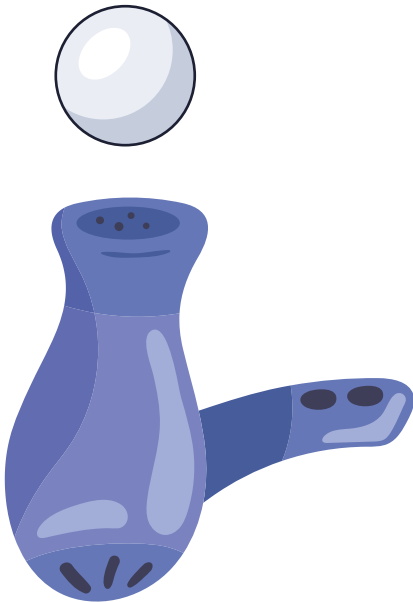
**STEP 2:** Turn on the hairdryer to highest setting.

**STEP 3:** Hold the ping pong ball in the air stream: Slowly release the ball into the stream of air.

**STEP 4:** Observe: Watch as the ball stays suspended in the air! Try moving the hairdryer slightly to see how the ball follows the air current.

### Materials

Hairdryer  
Ping pong ball



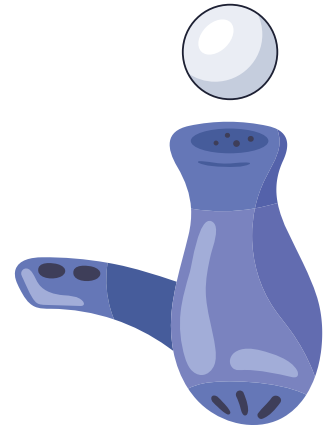
## WHAT IS BERNOULLI'S PRINCIPLE?

Bernoulli's Principle states that as the speed of a fluid increases, the pressure it exerts decreases. This principle helps explain how planes fly, why a shower curtain gets sucked toward you during a shower, and even how birds glide through the sky.

In this experiment, the fast-moving air from the hairdryer flows around the ping pong ball. According to Bernoulli's Principle, faster-moving air creates a low-pressure zone around the ball. The higher pressure in the surrounding air helps keep the ball suspended in place. If you move the hairdryer, the ball will follow the flow of air because it stays within the low-pressure zone.

# Bernoulli's Principle Observations

Use this worksheet to process and evaluate your work.



What happens to the ping pong ball when you change the dryer speed?

---

How does the position of the hairdryer affect the way the ball floats?

---

Does the ball stay in one spot, or does it move?

---

How does the airflow affect the stability of the ball?

---

What did you learn about the Bernoulli Principle?

---