Minion Levitation

Use the power of air to make your Minion float like magic!

Have you ever wondered how planes and birds stay up in the sky? It's all thanks to the power of moving air and changes in pressure. This invisible force can keep kites soaring, make a shower curtain mysteriously cling to you when the water's running — and even help a Minion balloon float in mid-air.

The CRAZY Scientist

www.thecrazyscientist.com

"Before we start — what do YOU think will happen?

Will your Minion balloon shoot straight up, hover in one spot, or wobble side to side?

What You Need

- 1 balloon (Minion-themed if you have one!)
- 1 hairdryer (set to cool or low heat)
- 1 small coin (10¢ or 20¢) placed inside the balloon before inflating – this helps it stay steady
- Optional: markers or stickers to decorate your balloon
- Parent or adult supervision when using the hairdryer

Step-by-Step:

1. **Load the Minion (adult help)**
An adult stretches the balloon's neck and slides a 10c/20c coin inside.
Shake the balloon so the coin rests near the knot end (it helps the balloon stay steady).

2. Inflate & decorate
The adult inflates the balloon to about and ties a knot.
Optional: draw a Minion face with markers or add stickers.

3. Set the hairdryer
Put the hairdryer upright on a stable table with the nozzle pointing straight up.
Choose Cool (best) or Low Warm and Low/Medium airflow.
Make sure the air intake is clear and long hair/clothing are tied back.

4. Make it hover!
Hold the balloon by the knot and place it a handspan above the nozzle.
Turn the dryer on and slowly move the balloon up or down to find the balance point where it floats.
Nudge left/right or tilt the dryer slightly to "steer" your Minion.

Try It Another Way
Compare with vs without the coin. Which hovers steadier?
Test small, medium, big balloons. Does size change the "hover height"?
Move the balloon higher/lower and time how long it can hover.

Troubleshooting
Shoots away? Airflow too strong or you're off-center — lower the speed and re-center over the nozzle.
Won't lift? Move a little closer or increase airflow one step.
Wobbly? Make sure the coin is centered at the bottom and the balloon isn't over-inflated.
Too warm? Switch to Cool or stop and let the dryer rest.

Safety

Adult supervision required.
Use Cool or Low Warm only; don't aim at faces; keep fingers/hair away from the intake.

What's going On?

The main idea here is air pressure — air always pushes from areas of high pressure towards areas of low pressure.

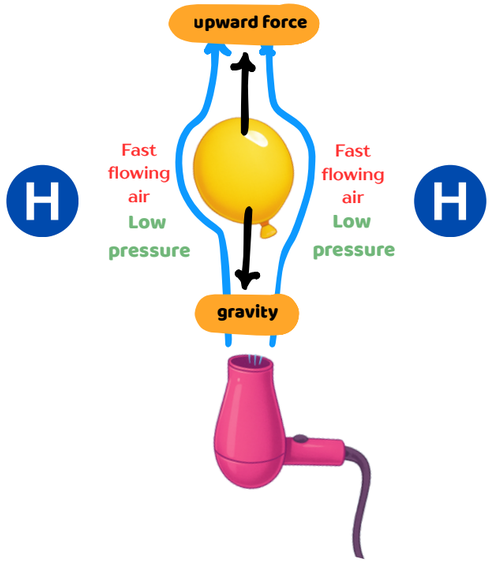
When the air from the hair dryer blows around the balloon, it moves faster. According to the Bernoulli Principle, faster-moving air has lower pressure.

So, the air just around the balloon becomes a low-pressure zone, while the air outside the airstream (labeled H) stays at higher pressure. The higher-pressure air pushes inwards toward the balloon, forcing it to stay inside the airstream.

At the same time, two other forces are acting:

- Gravity pulls the balloon downwards.
- The fast-moving air from the dryer pushes upwards.

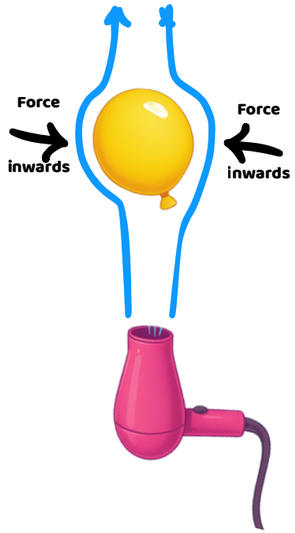
The balloon "floats" because these forces balance — the upward push of the low-pressure airstream against gravity, and the sideways push of higher-pressure air keeping it in place.



How Far Can You Move the Balloon?

Angled Air Challenge!

Once the balloon is floating, slowly tilt the hairdryer at different angles. Can you keep the balloon balanced in the airstream while moving it to the side? See how far you can guide it without letting it fall!



S T E A M

Test balloons of different sizes or materials (latex, foil, rubber). Do they float differently in the airstream? Record which type is most stable.

Use a phone or tablet to record the balloon in slow motion. Watch how it wobbles when you tilt the hairdryer — can you see the invisible air pushing it back in place?

Build a "balloon stabilizer" by designing cardboard wings or guides that could help the balloon stay in the stream longer. Test and redesign your invention.

Create a cartoon or comic of the balloon's "air adventure." Give the balloon a face and show its journey as it battles gravity and zooms in the airstream!

Measure how long the balloon stays floating at different dryer angles. Create a table to display your data.