



Balloon Flinker

What You Need

- small paper cup
- pencil or hole punch
- helium balloon with ribbon attached
- scissors

Make a helium balloon “flink”—neither float away nor sink to the ground.

Engineering Scoop

Gravity is **pulling down** on your balloon, the helium inside the balloon, and on the air around the balloon. The helium inside your balloon is a **gas**, just like air. But helium **weighs less** than air. So a balloon filled with helium weighs **less** than the air around it. The air around the balloon **pushes up** the balloon harder than gravity pulls it down, so the balloon **floats** to the ceiling. If you add **weight** to the balloon, you make the balloon **heavier**. Too much weight means that gravity **pulls down harder** than the air pushes up, so the balloon **sinks** to the ground. If you add the right amount of weight, the balloon will **flink**—it doesn't float or sink.



1 Use the pencil or hole punch to **poke** a hole on each side of a small paper cup.

2 **Put** the balloon's ribbon through both holes and **tie** a knot. **What happens** when you let the balloon go?

3 How can you make the balloon **flink**—neither float nor sink? Try changing the **length** of the ribbon. Or **cut** off small pieces of the cup.

4 **Keep changing** the design of your flinker until it flinks for **10 seconds**.



Redesign It!

Redesign your flinker so it can **carry** something. Add some popcorn, a message, or something else that is **light**. What do you have to **change** to make your flinker flink again? Choose **one thing** to change, like the **length** of the ribbon, the objects you add, or the **weight** of the cup. Then **test it** and **send** your results to ZOOM.

Sent in by Daniel T. of Hitson, TN



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