

Make a Balloon Stick to the Wall Like "Magic"

Ever seen a balloon "magically" stick to the wall? Almost every adult tried the classic balloon-on-wall trick as a kid, but it never ceases to amaze little kids who see it for the first time. The classic experiment uses a balloon and a head full of static, but this updated version uses a piece of wool fabric instead so you're not left with a head full of tangled hair at the end. Try it with your kids and watch their eyes light up in wonder.

What You Need:

- 2 balloons
- Synthetic or wool fabric that can create a static charge (a wool sock is ideal)
- Scraps of material
- Dry day when there isn't too much humidity in the air



What You Do:

1. Blow up the balloons.
2. Get your child to charge one of the balloons with static electricity by gently rubbing the cloth against it.
3. Ask him to stick the charged side of the balloon against the wall. What happened? Did it stick?
4. Invite him to press the balloon against other surfaces, such as the refrigerator door, a cabinet, or a chalkboard, to see if it will stick. He may need to charge the balloon again before doing this.
5. Now have him press it against the other balloon. Did they stick together?
6. Finally, ask him to charge the second balloon. Does he think the balloons will stick together now? Have him try it out.

What's Going On? When your child rubbed the cloth against the balloon he gave it a negative charge known as static electricity. If there is enough of a charge, the balloon will stick to surfaces that are neutrally charged, such as a wall, by attracting the positive charge in the wall to the surface. Since the balloon is so light, this attraction is strong enough to cause the balloon to stick to the wall.

If left on the wall, eventually the balloon will fall to the ground. Why? Static charge dissipates over time, so eventually the balloon loses its negative charge and unsticks from the wall.

A charged balloon sticks to an uncharged balloon just like a charged balloon sticks to the wall. When both balloons are charged, however, they push away from each other since two negative charges repel each other.