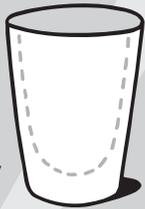


Balloon Car

Make and race a balloon-powered car!

Car Body



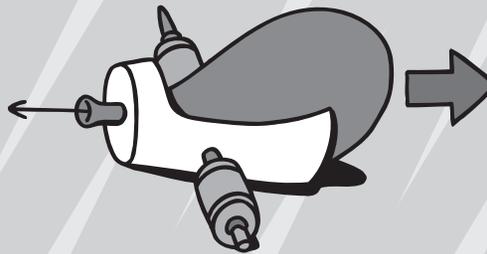
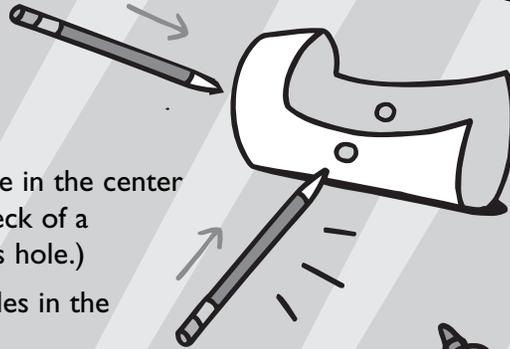
- 1 Cut out half of the cup.
- 2 Using a pencil, poke a hole in the center of the cup bottom. (The neck of a balloon will go through this hole.)
- 3 Using a pencil, poke 2 holes in the sides of the cup.

Wheels

- 4 Insert a straw through the holes on the side of the cup. Then, slide a spool on each end of the straw. The spools should touch the ground. If they don't, change the position of the holes for the straw.
- 5 Wrap a rubber band around the end of each straw. The rubber bands will keep the spools from sliding off.

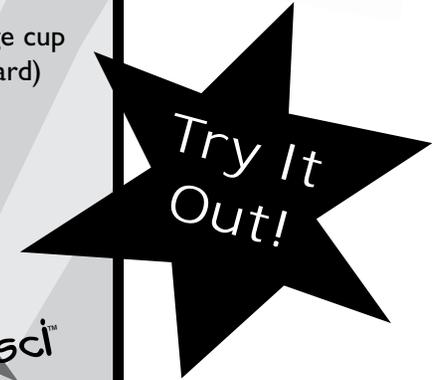
Fuel Tank

- 6 Push the neck of the balloon through the hole in the bottom of the cup. The balloon should be lying inside the cup.
- 7 Blow up the balloon. Then put your car on the ground, and let the balloon go!



What You Need

- paper cup (hot-beverage cup made of sturdy cardboard)
- scissors
- pencil
- plastic drinking straw
- 2 wooden spools
- 2 small rubber bands
- balloon



Science Scoop

Think of what happens when you stretch a rubber band—when you pull it and let go, it snaps back into its original shape. The more you stretch it, the faster and harder it snaps. A balloon is like a rubber band. When you blow air inside a balloon, you stretch the balloon. The more air you blow inside, the more you stretch the balloon. The more the balloon is stretched, the faster the air leaves the balloon. The force of the air leaving the balloon pushes the car forward.

Think of ways you can improve your balloon car. What happens if you use a larger or smaller balloon? How can you control how quickly or slowly the air escapes from the balloon? What happens if you change the weight of your car by cutting away more of the cup? Change one thing (that's the variable), and predict what you think will happen. Then test it and send your results to ZOOM.

Sent in by the Weston School of Weston, MA



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