

Balloon Race!

Steps:

1. Measure the buoyancy of the balloon in air
2. Find the area density of the cardstock.
3. Calculate what area of paper is required as counterweight.
4. Cut paper into counterweight
5. Test.

1. Measure the buoyancy of the balloon

a. Mass of counterweight [g]: _____

b. Mass of counterweight and balloon [g]: _____

c. Buoyancy of balloon (a-b) [g]: _____

2. Find the area density of the cardstock

d. Area of cardstock (length*width) [cm²]: _____

e. Mass of cardstock [g]: _____

f. Density of cardstock (e/d) [g/cm²]: _____

3. Find the area of paper that is the same mass as the buoyancy (c/f) [cm²]:

4. Cut the paper!

5. Test!