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Harley App  
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# Z3RO

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Nick "Sunshine" Dreyfus  
Harley "Stick Figure" App  
Patrick "Hobo" Keating  
Kevin "Blue Eyes" Deweese  
Adrian "Baller" Jauregui

"Design"

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BF-Dd  
Z3RO  
Balloon Fest Experiment Design

Purpose of this experiment:

The purpose of this experiment is to test the atmospheric pressure at increments of 200 feet. We will be designing a one way valve on a jar that traps the pressure at different altitudes.

PDS:

Our problem is to make a jar with a one way valve that trap the atmospheric pressure at different altitudes. We will need to make a flapper valve that can release pressure but does not let pressure in. We will need to test the jar to make sure that the pressure releases and doesn't increase. We will need to make sure the flapper valve can hold the pressure at 1000 feet and hold that pressure until it reaches the ground. We will take a total of 5 trips up and down in order to record the data from inside the pressure within the jar. We have to figure out how to keep the temperature the same throughout the entire test so the pressure is not from the heat but from the atmospheric pressure.

Research:

We found out that the average atmospheric pressure at sea level is about 1.225 kPa. We also know that today, gas balloons are often filled with helium, which is non-flammable. Gas balloons are regularly used for high-altitude research like weather balloons.

Helium-filled balloons for scientific research have flown to altitudes more than 50 km above sea level, above Earth's stratosphere and into the mesosphere. Such balloons fly above over 99.9% of Earth's atmosphere and operate in near-vacuum.

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Hypothesis:

Our hypothesis is that as the altitude increases the pressure inside the jar should go down.