

# Centuria

BF-V

per. 2

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## PURPOSE

The purpose of our device is to record the pressure at about 1000 feet. It will be able to show us the air pressure at 1000 feet and tell us the pressure decrease coinciding with the altitude increase.

## METHOD

We will be using a mason jar wrapped in tin foil to keep the temperature as constant as possible. It will be attached to a one-way valve attached to a T-valve. This will be attached to a barometer that the air in the jar will reach the barometer and its pressure will be recorded. To find the altitude, we will use a Seagull device, which will be attached to the gondola.

## DATA

The data could be as follows:

### Height Pressure

0ft,	98 kPa
100ft,	80kPa
200ft,	76kPa
300ft,	69kPa
400ft,	60kPa
500ft,	56kPa
600ft,	48kPa
700ft,	41kPa
800ft,	38kPa
900ft,	29kPa
1000ft,	19kPa

## ANALYSIS

The uncertain parts of the experiment are if the jar could leak air or the LabPro or Barometer might not have enough battery power. We must make sure the jar is air-tight before we bring it onto the field. Also, we must make sure the electronic equipment has fresh batteries.

## CONCLUSION

The final thing is that the balloon will work if the barometer is properly working, the jar is not leaking, and, moreover, if our team works as a team. In other words, everyone should contribute to the writing of the papers, the actual launch, and procuring of the materials. Finally, the most important thing is to actually perform the experiment and to have fun doing it.

## UNCERTAINTIES AND MALFUNCTIONS

The uncertainties of the report is that it may not be as precise as we think it will be and also it might not get the right temperature if we do not follow the procedure we explained carefully with the aluminum foil around the jar keeping temperature out. When it hits the top height it may not cooperate with the barometer or the barometer might not read the jar accurately and also we have to make sure the barometer has batteries and make sure the tubes for the one way valve are securely tight to the jar. Finally, the string

cannot actually go to 1000 ft because the string's length only goes to 965 ft. So we will not have the actual data for 1000 ft, but we will have data that at least comes close.