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# BF-D Pac-Man

## Design Brief

For our project we are going to design a device that will go up into the altitude and capture the air pressure up that high. For this project we will design a check valve that let air out, but not in.

## Research

Alt	M	in.Hg	mm Hg	psia	kg/cm <sup>2</sup>	kPa
0'	0	29.92	760.0	14.696	1.0333	101.33
500	153	29.38	746.3	14.43	1.015	99.49
1,000	305	28.86	733.0	14.16	0.956	97.63

## Designs

For our first design we were going to drill a little hole in the top and cover it with thin material. There will be a little opening to let air out, but not in.

For our second design we are going to cut three sides of a square out of the containment area leaving one side attached. The three sides cut out will have a seal around it so it can let air in, but not out.

(All the containment areas will be in a glass jar. All the glass jars will be insulated

from heat by house insulation and tin foil to keep the light out.)

## Proposed Experimental Method

We plan to send our experiment into altitude a few times to check how accurate our check valve is to capturing the altitude a different pressure.

We will be using a glass jar, barometer to tell the pressure, a Labpro to convert it to a language we can understand , a calculator to report the data to us. We will put into the altitude by a helium balloon.

We will be using a barometer to check our experiment when it comes down. One problem is keeping the light and heat, from the outside, from changing the pressure inside our containment area.