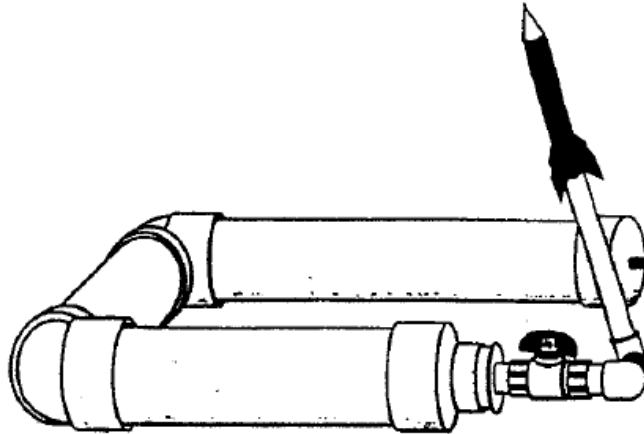


PLEASE NOTE: User assumes all liability.

## Industrial Air Rockets

Paper rockets can be made very easily. However, the rocket launcher does take some time to build but will provide many hours of science fun.



### **Launcher building**

Instructions to build the launcher are in a separate document. Several versions are on the internet. The original NASA plans have been removed from the NASA website due to safety concerns. This launcher is being used by the Challenger Centers.

### **Safety**

Guidelines should be explained to the scouts and followed.

1. Use safety goggles when launching rockets.
2. Do not stand near or in the path of the rocket to be launched.
3. Do not over pressurize the rocket launcher.

### **Rocket building**

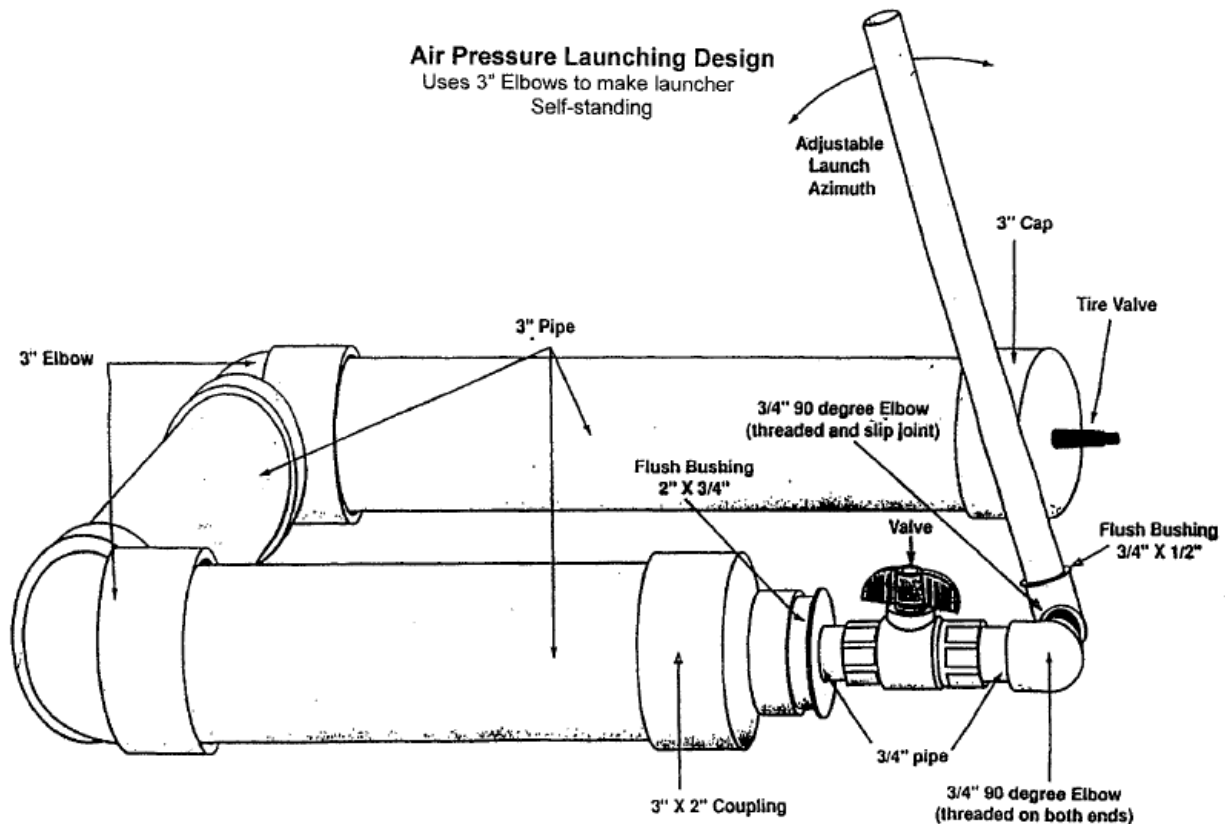
Rockets are made from construction paper and tape. A short length of PVC tubing is used for the form to roll the paper around. For best performance the paper should be snug on the form but able to slide easily. All edges of the paper should be sealed well with tape to create a “sealed” container. Make sure students firmly attach the fins and nose cone for their rockets. It is a good idea to have nose cone semi-circles precut as well as rocket fins to help the scouts build their rocket faster.

**Note:** *Poorly attached nose cones will blow off the rocket leaving the rocket behind or allowing air to escape when trying to build pressure for launch. Rocket bodies that are made poorly made may explode into confetti while on launch pad.*

PLEASE NOTE: User assumes all liability.

## Air Pressure Launching Design

Uses 3" Elbows to make launcher  
Self-standing



### References

"Air pressure rocket kit"

<http://www.eaa.org/chapters/resources/cookbook/list.asp>

"Newton's laws as they apply to rockets"

[http://www.capmembers.com/aerospace\\_education/general/links-to-cap-downloads/](http://www.capmembers.com/aerospace_education/general/links-to-cap-downloads/)

"Industrial Strength Rocket Launcher"

[http://cindispace.utdallas.edu/education/rocket\\_launcher\\_complete.pdf](http://cindispace.utdallas.edu/education/rocket_launcher_complete.pdf)

"Making Paper Rockets"

[http://cindispace.utdallas.edu/education/paper\\_rockets.pdf](http://cindispace.utdallas.edu/education/paper_rockets.pdf)

"National Association of Rocketry (teacher resources)"

<http://www.nar.org/teacher.html#FREE>