

ROCKETS: Lesson 6

This webpage found at:

<http://pa4h.cas.psu.edu/Curricula/AerospaceSupp/Activities/Rockets/Overview/RocketsLesson6.htm>

Building a "Powerful Payload":



Equipment Needed:

- Scissors
- Binder clip (not paper clips)
- Masking tape
- 1 Straw
- 1 cup (small drinking or snack cup)
- About 10 feet of sturdy, smooth string

- 1 balloon
 - The larger the better
 - The book calls for a long balloon, but it can be done with normal shaped balloons. Long balloons work better, though.
 - The following demonstration is with a normal shaped balloon.
- Something for payload
 - Nuts, small washers, beans, etc.

Tip: try using something like beans which are not very dense -> you can add many more before you exceed the payload capacity of the balloon.



Step 1:

Inflate the balloon as much as possible.

Once inflated, twist the end of the balloon.



Step 2:

Clip the end of the balloon with the binder clip. Adjust binder clip until no air is leaking out. You should be able to hear if it is.



Step 3:

Tape the straw to the inflated balloon with two pieces of masking tape.



Step 4:

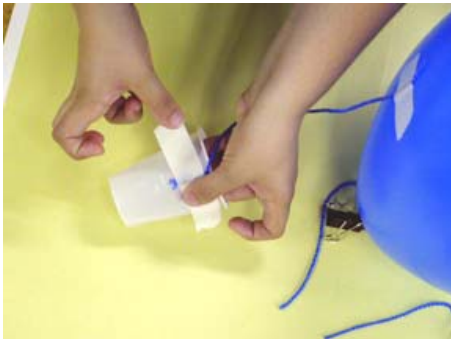
Cut three 12" pieces of string.

Tape them to the balloon so they are spaced evenly around it.



Step 5:

Tape the free ends of the string to the snack cup.



Make sure the strings are taped to the cup in the same order as they are taped to the balloon.



Step 6:

There should be approximately 7 feet of string remaining. Tape one end high on the wall (~ 5-6 feet up).



Thread the other end of the string through the straw.



Step 7:

Tape the free end of the string to the floor.



Step 8:

Remove the binder clip.

Tip: Before you release the balloon, stretch the opening a bit while still keeping it pinched. Otherwise, the balloon opening may have stuck together and the air won't flow as freely. Air must flow as freely as possible for maximum lift.

Web design: Victoria Kramer. This page was last updated on September 26, 2005.
There are no plans for future updates.