intro: Homemade bottle rockets
A while back my friend asked an easy way to make a bottle rocket .....so this Instructable was born

- Make sure to wear the proper protective gear such as some kind of glasses for eye protection, safety glasses would be best .....*some sort of breathing protection would also be advised
- gloves help as well so you don't burn yourself

Check the video for a picture of me dressed like a ninja with homemade safety wear and my first three rocket launches

I tried embedding it but alas, photo bucket is lame. so you get a crappy long link ....YAY
http://s46.photobucket.com/albums/f136/goawayndstay/?action=view&current=ceec0f6c.pbr

PS. if you like it ....rate it up ....don't flake !

step 1: What You Will Need
1. Post its
2. A Hammer
3. a small bit of fuse
4. a small mixing bowl
5. A mortar and pestle
6. needle nose pliers
7. duct or scotch tape
8. wooden skewers
9. A Pencil
10. A nail
11. Black Powder
12. kitty litter

- Pictures of these will be listed in order below
step 2: Begin Rolling The Tube

Fold your post it in half horizontally sticky side up so the sticky part bonds with the non-sticky part

And Begin rolling the tube
**step 3: Tape The Tube**
Using scotch tape preferably, tape the tube tightly on the pencil

![Image of taped tube](image1.jpg)

**step 4: Kitty Litter Grind Up**
Grind your kitty litter using the mortar and pestle
Note: this is sometimes very difficult

![Image of mortar and pestle](image2.jpg)

**Image Notes**
1. YAY generic white powder

![Image of ground litter](image3.jpg)

**step 5: pour the litter**
Put about 1/4 inch of kitty litter into the tube being sure to press tightly against the working surface so not to spill any out.
Then, put the pencil in after to litter
Starting slowly, pound the pencil into the tube compressing the kitty litter

* The reason Kitty Litter is used is because it is almost 100% Bentonite clay which is the same thing used in model rockets (the sealant)
Image Notes
1. Press tightly against the table so the powder does not fall out of the tube

1. the small black shards are black powder from the mixing stage ....avoid this if possible

**step 6: Add the Black Powder**
Follow the Litter with the Black Powder being sure to compact it thoroughly.

Image Notes
1. remember to grind up your black powder if needed this may be needed if the black powder was purchased in a gun and ammo store *

Image Notes
1. Press tightly against the table so the powder does not fall out of the tube
step 7: MakeYour Nossel
Taking the hammer and nail ....or better yet a drill bit in a drill.... CAREFULLY tap the nail into the top layer of litter all the way through to the black powder(this is the nossel)
Ps the smaller the hole, the more propulsion. But with a better chance of it exploding on ignition

Image Notes
1. Sorry for the blur

Image Notes
1. this is stressed
step 8: FUSETASTIC
Take a bit of fuse and cut it with the needle nose pliers. About 2” will do fine.
bend the last bit of the fuse about an eighth of an inch onto itself.

Image Notes
1. This part of the pliers will work wonders for cutting fuse.

step 9: It's beginning to look alot like *Rockets*
Insert fuse into hole made by the nail. If needed, you can also put a small ball of paper in the hole to hold it in, but mine usually stay fine.

Image Notes
1. Scotch Tape makes the rockets look much better and makes them weigh less. But it's not that important.

step 10: Scewer Galor!
Get your skewers. For this size of rocket, the skewers were too big, so I cut them.
step 11: Coming Along
Using more scotch tape or in my case ductape, tape the skewer onto the rocket

step 12: AND BAM....YOUR DONE
That's about it ....Enjoy

If there are any questions please, comment, and i will do my best to answer them

Oh I almost forgot, please use these responsibly. you never know what could happen.
Also check the local laws in your area or zip code, to make sure bottle rockets are legal

- One Last Note.... If your first bottle rocket does not shoot as planned don't give up ....it may be that its too heavy or that you nozzle is just the wrong size.

Happy Rocketing !
~Goawayndstay

Hopefully the video will work ....If not go here:
http://s46.photobucket.com/albums/f136/goawayndstay/?action=view&current=rocketvideo_0001.flv