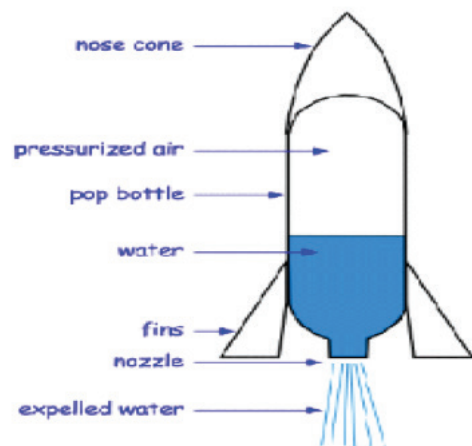




Make a Water Bottle Rocket

Instructions

1. Design your nose cone and fins, cutting them out of the cardboard. Triangles, curves, and kinks at the bottom point can all affect the flight of the bottle rocket differently.
2. Fix the nose cone to the bottom of the bottle. If you want to add play dough to balance the bottle's weight, you can add it in here before you stick the nose on. Or, you could add play dough as ballast around the neck of the bottle.
3. Fix the fins to the bottle with tape or glue. Make sure the bottle opening is facing downwards and the fins are equally spaced. It is best to use at least three fins to keep the bottle balanced in flight.
Your rocket should look similar to the picture when you are ready to launch it.
3. Depending on the type of launcher you use you may need a rubber bung or valve to fit the bottle opening too. This will need to be lightly greased, and a locking mechanism used to hold it in place till you are ready for launch.



Make sure you launch the rocket outdoors, and keep well away from buildings and people. If it does not launch, ensure you do not point the bottle at anyone, and release the pressure gently and safely through the valve.

You can buy launchers like the one described here: <http://hogwildtoys.com/aquapod/instructions.html>

Or make your own, as described here:

<https://www.sciencelearn.org.nz/resources/406-water-bottle-rockets>

<http://www.itsalwaysautumn.com/2013/06/21/diy-pvc-pipe-rocket-launcher.html>

See more instructions here <http://www.wikihow.com/Build-a-Bottle-Rocket>

Equipment

- A 1.5L plastic fizzy drink bottle
- Cardboard for fins
- Scissors
- Tape (or glue)
- Play dough (if you want to add mass to the nose cone)
- Water
- Rubber bung and tyre valve or a launcher