

# How to Make a Potato Cannon



Made out of a few simple PVC fittings and lengths of pipe, potato cannons can launch spuds up to 300 yards. They're cheap and fun to make, and they're also a great way to get introduced to the basics of cutting, priming, and gluing PVC together. If you've been hesitant about DIY plumbing, making a potato cannon is a pretty low-risk intro course.

A potato cannon/launcher/gun consists of a combustion chamber and a barrel. The barrel is made out of 2" PVC pipe and the combustion chamber is made out of 4" PVC pipe. The pieces are joined together with an adapter. When you fill the combustion chamber with fuel, like hairspray, and trigger it with a spark, it will combust and send whatever's in your barrel flying into the stratosphere.

You only need a few simple tools to get started. Here's how to do it.

*Note: While "spud guns" aren't federally regulated, and are legal in nearly every state, a few states/municipalities do have restrictions on them; so before making/using, check to see if yours does.*

## Supplies/Tools Needed



1. 4" PVC pipe - 1.5 feet
2. 2" PVC pipe - 4 feet
3. 4" PVC threaded coupler
4. 4" PVC cleanout cap
5. 4" to 2" PVC adapter
6. PVC primer
7. PVC cement
8. Saw
9. Drill with 1/2" drill bit
10. Potatoes
11. Tape measure
12. Stick lighter
13. Hairspray (not pictured)



# How to Make a Potato Cannon

## Step 1: Cut PVC to length.



Cut your 4" PVC pipe to 18" inches (foot and a half) in length, and your 2" PVC pipe to four feet. Take care to ensure your cuts are clean and square so that the fittings will seat flush to the end of the pipe. If you have lots of extra frayed bits of PVC after your cut, use some sandpaper to smooth them out. You can also often get your pipes pre-cut at hardware stores.

**Step 2: Glue adapter onto one end of your 4" PVC pipe.**



To glue PVC together, start by priming both pieces with PVC primer (purple in the photos), let it dry for 10 seconds, and then apply PVC cement. Once both parts are primed and glued, push them together, give them a quarter turn, and hold for 30 seconds until set.





**Step 3: Repeat the gluing process with your other connections.**



Attach the 4" threaded coupler onto the other end of your 4" pipe, and attach your 2" PVC pipe to the adapter to complete your barrel.







Step 4: Screw on the 4" cleanout cap to the end of your combustion chamber.





Step 5: Use a  $\frac{1}{2}$ " drill bit to create a hole in your combustion chamber.



The placement of the hole doesn't really matter. Somewhere in the middle third or so of the chamber works just fine.

# How to Launch It

---

Step 1: Jam a potato into the barrel of the cannon.



Use a broomstick or smaller diameter piece of PVC to jam it down into the barrel, like a muzzleloader. You do want the potato to fit fairly tightly; if loose, it will probably still launch, just with far less gusto.



**Step 2: Unscrew cap and fill combustion chamber with hairspray.**



A spray of about 5-7 seconds is plenty.

**Step 3: Quickly replace the combustion chamber cap to hold in the hairspray.**

**Step 4: Aim, stick lighter into ignition hole, and light.**



Be prepared, as it's a pretty instantaneous shot.

**Step 5: Watch where your potato goes, reload, and repeat!**