# VF CREATIONS WOODSHOP

# RUBBERBAND CANNON

**ESTIMATED LENGTH:** 5 HOURS (SPLIT INTO 2 CLASSES)

**ESTIMATED COST:** $5

## NEEDED MATERIALS:

- 1- 2x4 that is 8.5” long
- Round file
- 1 /4” dowel rod
- 5/16-inch dowel rod
- 3/4-inch hole saw
- 1.5-inch hole saw
- 5/16 -inch drill bit
- 1/2-inch drill bit
- 3.5-inch hole saw
- 9/16-rasp ball bit
- Gutter Nail (or 1/4” drill bit longer than 3.5”)
- Sandpaper
- Rubberband

# INTRO AND CLASS SUMMARY

## DAY 1

### 1. Gather Students And Begin In Prayer.

### 2. Read And Discuss Quotes (Your work reflects you):

"Amos of old, cried out, said, "The lion has roared, who can but fear? And God has spake, who can but prophesy?" Who can but prophesy, when you see God speaks and said a certain thing will happen, and there it is?

A lion roars, everybody is scared, yes, sir, if you ever heard one roar in the jungle. You can hear these meowing around these cages out here, them tame lions, but you ought to hear a real, wild one roar one time. Little rocks will fall off the hill, five hundred yards away. I want to see where all that belch comes out of them lungs. And he throws his head down, throws that fur up; I never heard anything... Like a--a cannon going off, when he belches out that big roar in his lungs. Who couldn't be scared?

They say, if you're ever killed by a lion, it's painless. He scares you to death 'fore he gets to you. See, you don't notice it. He scares you with that great ferocious roar, and here he is on you in a split second.

He said, "The lion has roared, who can but fear? And God has spoke, who can but prophesy?" When you see God doing something, you say... "I might not be a prophet..." Jonah said... "I might not be a prophet, or the son of a prophet. But God has spoke, who can but prophesy?"

I might not be a prophet, I might not be this, that, or the other. When I see God doing anything, and I see it here in the Word, and He promised it, who can hold their peace and keep still? Sure, He's done it.

Neither can we hide behind creeds and all these here fellowships, and down to--to Tarshish. We don't want to go with them fellowships."

65-0217 A MAN RUNNING FROM THE PRESENCE OF THE LORD

"And when God speaks, the prophet cries. And then let His Kingdom take heed to what he is saying. God has spoken. Let every creature of His Kingdom listen to what He is saying."

62-0513M THE WAY OF A TRUE PROPHET OF GOD

AMOS 3:1-8

1. Hear this word that the LORD hath spoken against you, O children of Israel, against the whole family which I brought up from the land of Egypt, saying,

2. You only have I known of all the families of the earth: therefore I will punish you for all your iniquities.

3. Can two walk together, except they be agreed?

4. Will a lion roar in the forest, when he hath no prey? will a young lion cry out of his den, if he have taken nothing?

5. Can a bird fall in a snare upon the earth, where no gin is for him? shall one take up a snare from the earth, and have taken nothing at all?

6. Shall a trumpet be blown in the city, and the people not be afraid? shall there be evil in a city, and the LORD hath not done it?

7. Surely the Lord GOD will do nothing, but he revealeth his secret unto his servants the prophets.

8. The lion hath roared, who will not fear? the Lord GOD hath spoken, who can but prophesy?

## 3. Go Over Basic Safety Rules.

## 4. Class Summary.

In this class you will learn how to use a drill press, miter saw, rasp, glue wood pieces together, do a little hand sanding and use a cordless drill. We will be creating our very own cannon from scratch. This project contains many detailed little steps, but is a lot of fun, especially when you can start using your completed cannon that will shoot out anything you put down the barrel, using a rubberband.

## 5. Show Sample Cannon.

## 6. Building Your Rubberband Cannon:

Follow step by step instructions starting on page 3.

# DAY 2

## 1. Gather Students And Begin In Prayer.

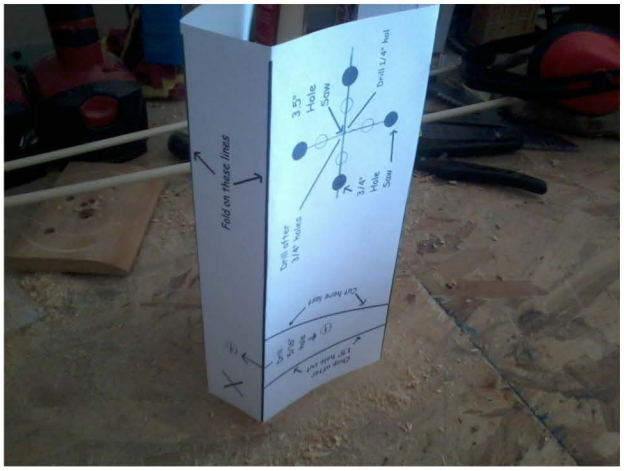
## 2. Remind Students Of Quote And Theme.

## 3. Go Over Remaining Steps (Wherever You Left Off From Day 1) And Continue Building Cannon.

# Rubberband Powered Wooden Plunge Cannon

Tools needed:

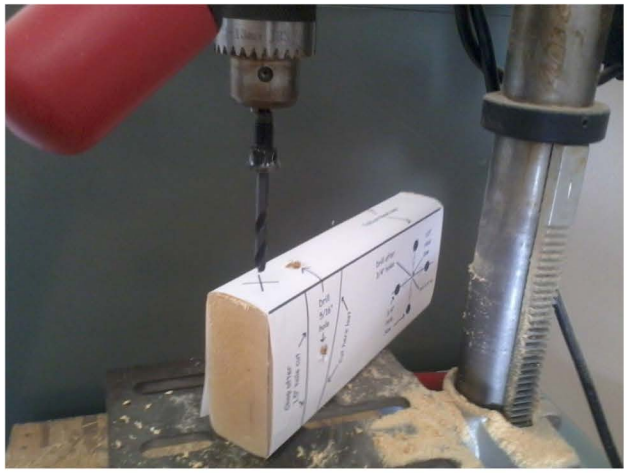
- Round file
- 5/16 –inch drill bit
- 5/16-inch dowel rod
- 1/2-inch drill bit
- 9/16-rasp ball bit
- Sandpaper
- 2x4 - 8.5" long
- 1/4" dowel rod
- 3/4-inch hole saw
- 1.5-inch hole saw
- 3.5-inch hole saw
- Gutter Nail
  (or 1/4" drill bit longer than 3.5")
- Rubberband




Print the template page and fold on lines indicated..

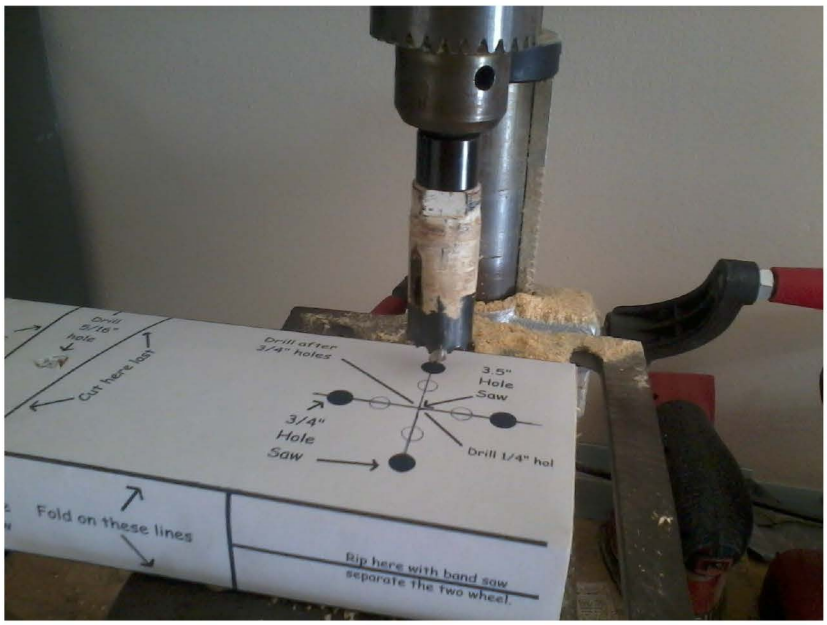
Wrap the template page around a 2 x 4 x 8.5 inch board as shown. Secure by stapling to block as illustrated.


Drill a 5/16-inch hole through the broad side of the board, and about 1/2-inch deep on the narrow side.

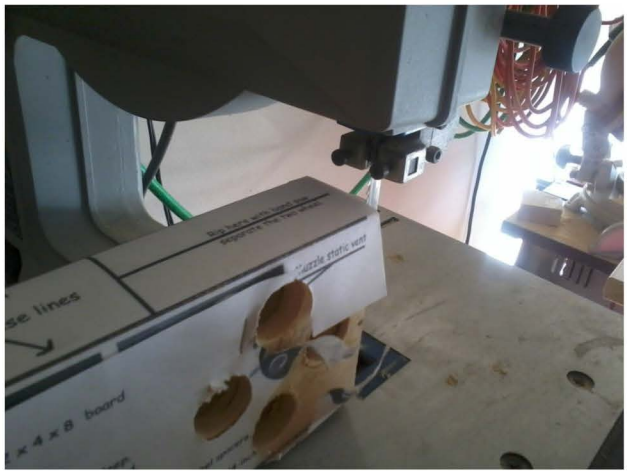


Using the 1.5-inch hole saw arbor, determine the X on the side that best centers the narrow side. Drill the pilot hole as deep as you can go.

I used the gutter nail with the head clipped to drill the remainder of the hole depth through to the other side.




Using the 3/4-inch hole saw… Drill a score-hole in each of the 4 indicated dark colored marks, with the pilot portion of the bit only. Do not allow the saw portion to penetrate the paper yet. Do the same for the 3.5-inch cross-section illustrated here. The saw part of the bill will tear the paper, so the references need to be copied, by scoring the holes.

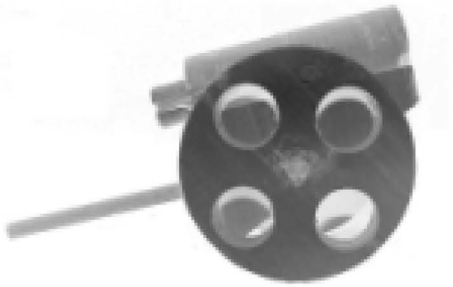



Now drill the four 3/4-inch holes as shown here.

Be sure to keep the plugs created by this drill, they will be used later, in other parts of the cannon.

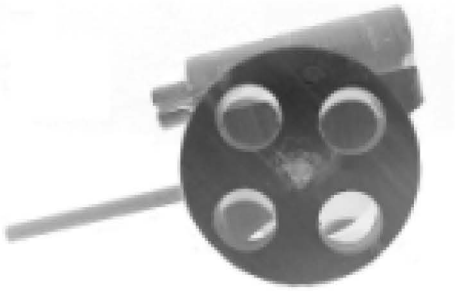
Notice the scored-pilot hold mark in the center for the 3.5-inch hole saw.

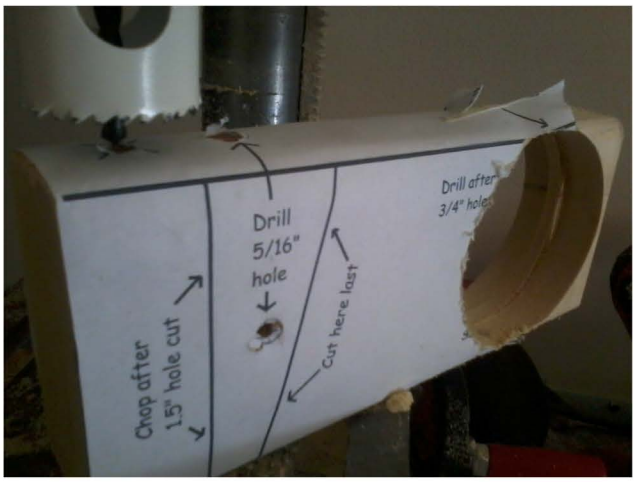
Using a band saw, cut along the RIP line indicated up to the stop line , as shown.



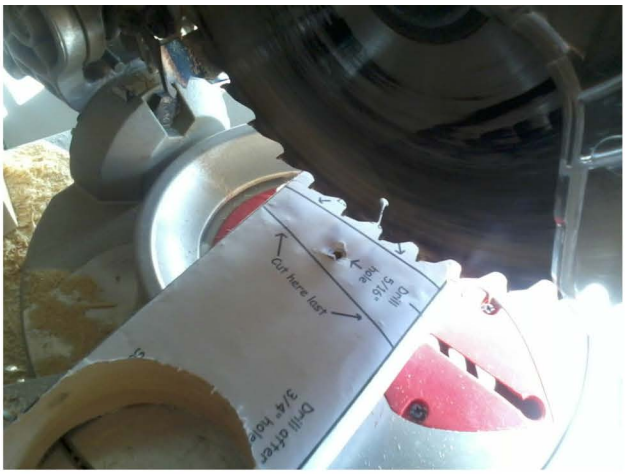


Using the 3.5-inch hole saw. Align the pilot bit with the score-mark on the board as indicated, and cut the board. This will make the wheels.






Using the 1.5-inch hole saw, begin drilling the cannon barrel. Drill until the hole saw tops out, then flip the board over and repeat the process from the other pilot hole created earlier with the gutter nail.





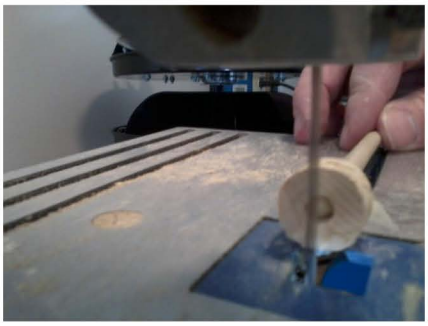
Using a miter-saw, cut the 2 x 4 as shown on the top side of the line. Do the same for angled line as well. (Bottom side)

By now you should have the barrel, two wheels, left over plugs from the wheel hole cut-outs, and the cannon chassis.

Be sure to sand any rough edges from the components created.

Using a long 1/4-inch dowel rod, insert into one of the plugs created from the 3/4-inch holes. The dowel is a safety stick for the next part. The band saw.

Using a band saw, cut two wheel spacer s about 1/2-inch thick.



Using the band saw. Cut a notch into the end of the remaining plug as shown. This will be used later to hold the rubber band in place for the action-part of the plunger.

To create the muzzle, drill a 1/2-hole halfway into one side of the barrel. The other side will be for the action-plunger.

Using the 9/16-inch rasp ball… Drill into the 1/2-inch muzzle to the depth drilled by the 1/2-drill bit.

Flip the barrel over to the action side. Using the 5/16-inch drill bit, re-drill the action hole to 5/16-inch. Be sure to drill into the 9/16 -inch chamber of the barrel.

Using the arbor only from the 3.5-inch hole saw.

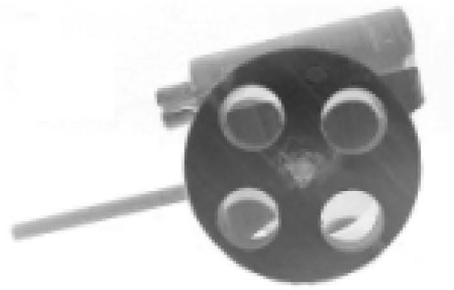
Position the bit, about 3/4-inch from end of the action -side of the barrel. Drill slowing through the barrel.

Glue and insert 1/4-inch dowels into the two holes drilled from previous step. Try not to enter the action chamber with dowels.

From the muzzle side, using the cannon chassis and hole-plug. Drill a hole on the muzzle half of the barrel all the through the barrel into about 1/4-inch of the chassis.

Insert the 1/4-inch dowel all the way through the barrel, leaving about 1/4-inch extending from the the other side.

Apply a small drop of wood glue on 1/4-inch side only.

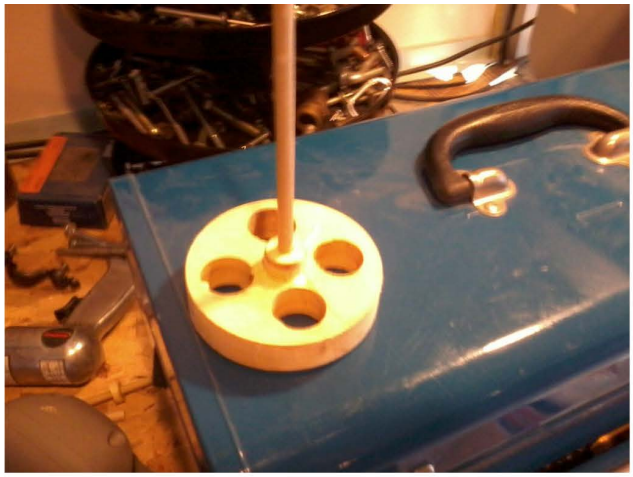



Apply a generous layer of wood glue on the chassis as shown. Align the barrel to the hole drilled into the chassis and press the two components together.

Using the 9/16-inch rasp ball... Drill through the dowel rod.

Remove the dowel from the top of the barrel. The hole that remains will be a static chamber vent hole.

The notched action-plunger's dowel should be about 1-inch less the length of the entire barrel, as shown above.



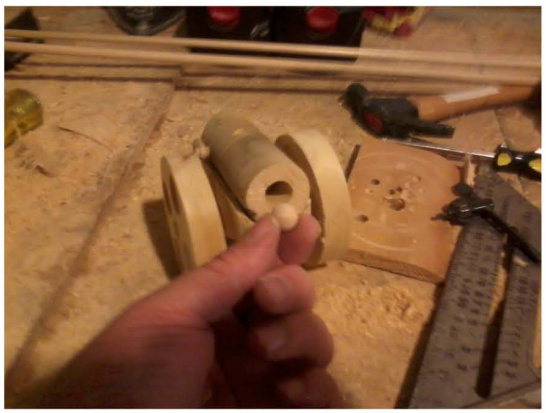
Using a 5-inch piece of 1/4-inch dowel rod. Slide one of the wheel spaces on to the dowel, leaving enough dowel protruding for the wheel attachment. Apply some glue to the wheel side facing the spacer, and attach as shown.

Insert the dowel-wheel assembly into the cannon chassis as shown. Attach the other wheel spacer. Leave enough space to allow the wheel axle to spin freely. Apply glue to the other wheel hole area.

Use the band saw to trim excess dowel rod protrusions from the outside edge of the wheel.

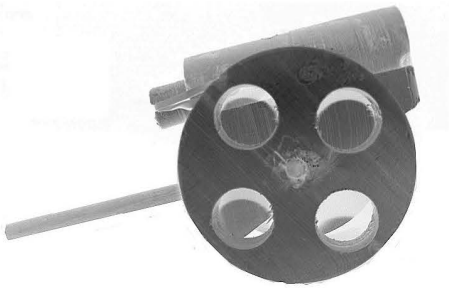
Cut 6-inches from the 5/16-inch dowel rod. Apply some glue to the tip, and insert the dowel into the rear hole drilled in the chassis.

Insert the plunger, attach a rubber band to the dowels as shown.



Load the cannon from the muzzle. Pull the action plunger, release to fire. BE SURE NOT TO POINT THE CANNON AT ANYONE. (Spray a fast drying clear coat on cannons when finished.)

1. Fold the template as shown and fit to a 2 x 4 x 8 board
2. Drill the 3/4" in holes next.
3. Drill the 1.5" holes next
4. Drill the 5/16" hole below the chop line next
5. Drill the 5/16" hold on the 2" edge about 1/2-inch deep.
6. Rip 2x4 on the Rip Line shown to the stop line presented.
7. Drill the 3.5" hold next.



Save the plugs from the 3/4" hole saw to be used for plunger and wheel spacers.

NOTE: You may have to reem the 1/4-inch holes help the insertion of the 1/4-inch dowel rod pieces.