

Pinhole Camera Instructions

The shoebox camera is the simplest of all cameras. It has no moving parts and can be built and used by just about anyone. It has no lens, rather a pinhole which, because of physics, will act like a lens because of its small size.

Materials Needed:

- Shoebox
- Black Tape
- Matte Black Paint
- Small piece of thin metal
- Push Pin

Step 1:

First, tape all the edges of the box and lid so when you close it, it will make a nice seal. Then paint the interior of your box matte black. The objective is to make it 100% light proof, otherwise your paper/film will be exposed and your picture ruined.





Step 2:

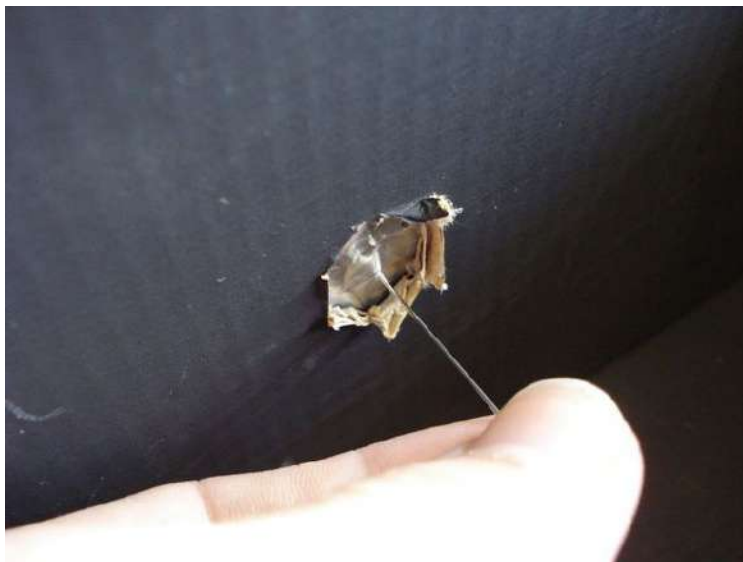
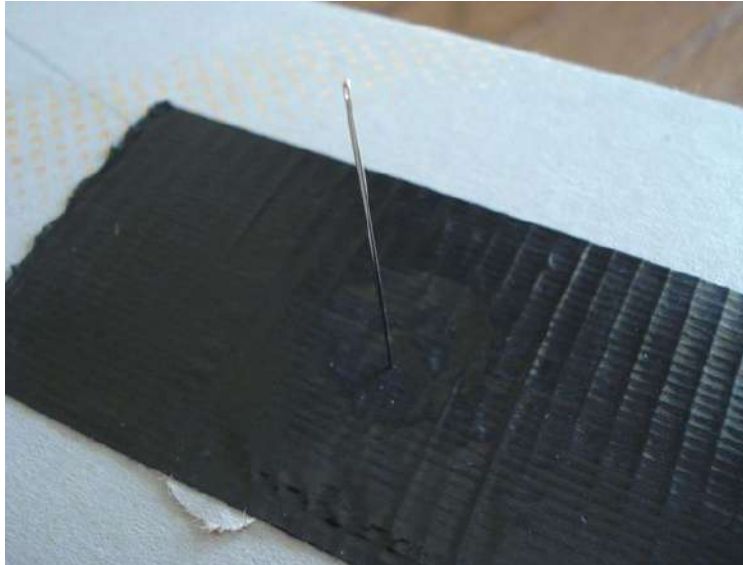
Cut a finger-sized hole in the middle of one of the long sides of the box. Then tape your piece of metal to the outside of the box, centered with the hole. The piece of tape should be larger than the metal and completely cover it.



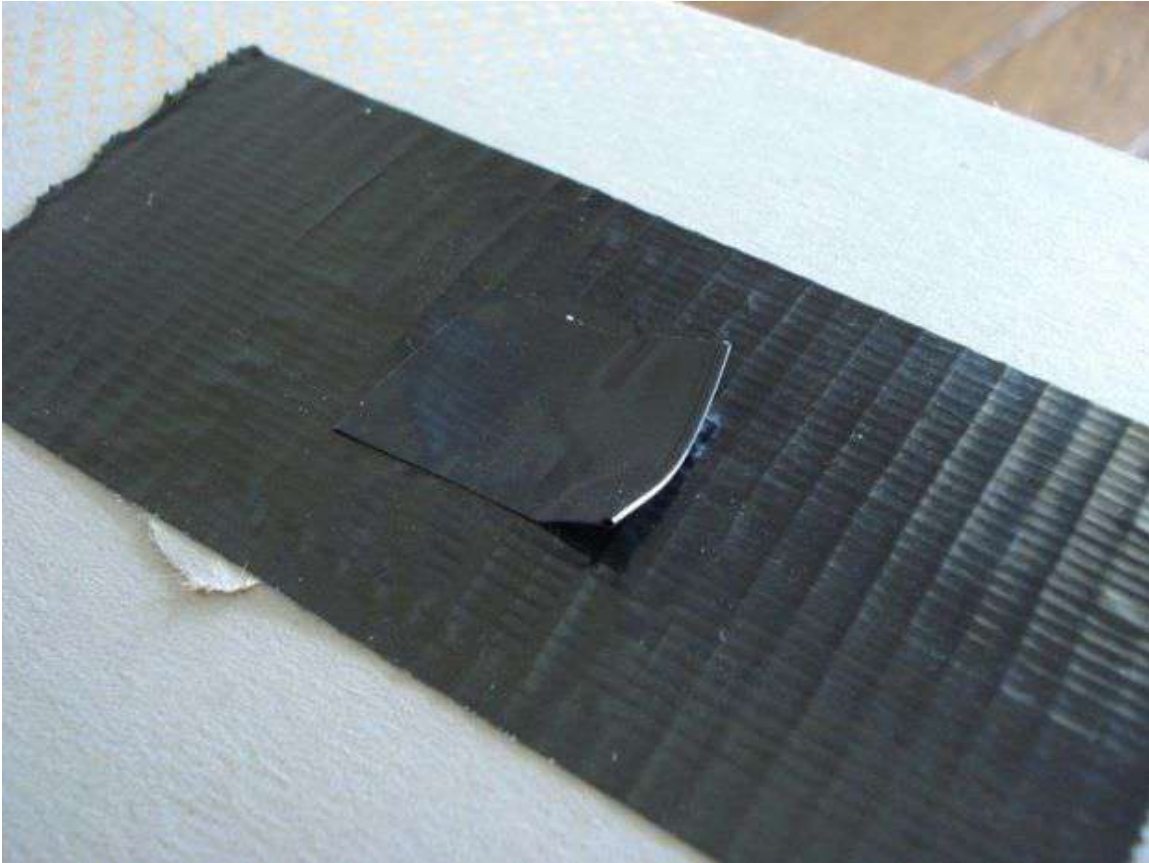
Step 3:

The pinhole is the most crucial part of the camera.

1. CAREFULLY cut a square smaller than your metal piece in the direct center of your lid.
2. Poke a hole directly in the center of your piece of metal with a push pin. Put a piece of cardboard under before poking to keep the integrity of the metal.
3. Tape the metal "lens" in the direct middle.



Step 4: Create a shutter by covering the pinhole up with a small piece of tape. Take down the shutter so no light leaks in when it's not supposed to be open.



Step 5:

Now your shoebox camera is complete and you're ready to test it. ***In a completely darkroom***, tape a piece of film on the opposite side of the pinhole, being sure that it is flat against the side. Close your box and it's ready to shoot.

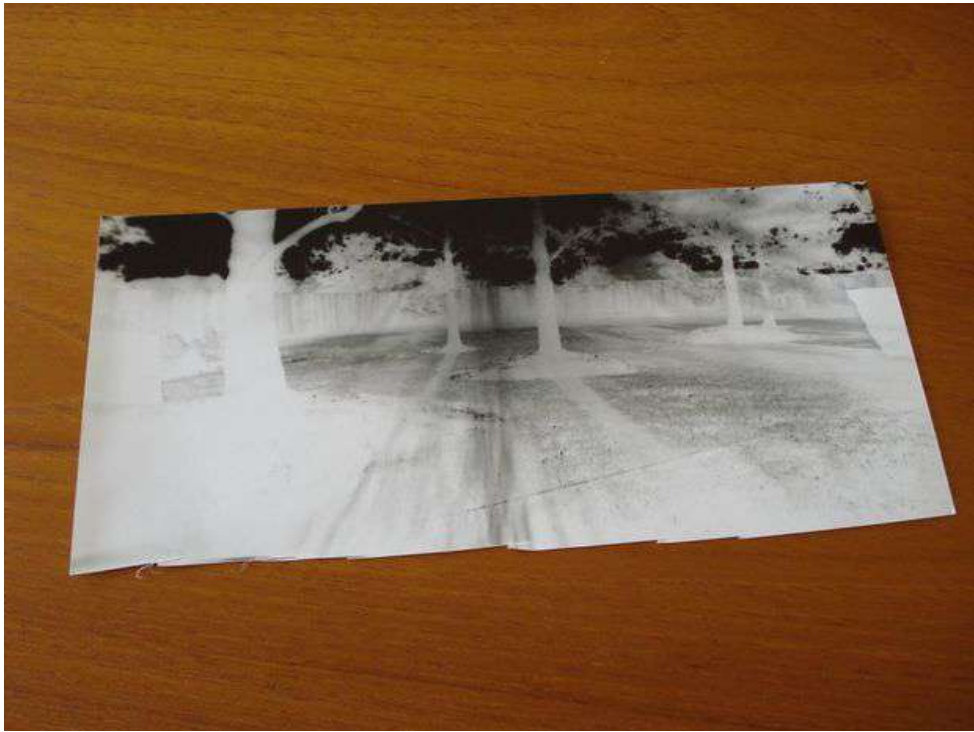


Step 6:

When you go to shoot your first photo, you will really be completely guessing on the exposure time. Some only take 30 seconds whereas others may take tens of minutes. It all depends on how big your pinhole is, how sensitive your photo paper is, and how bright the scene your shooting is. After you've exposed your photo paper, place the tape back over the pinhole and head back to the darkroom to develop your photo.



Step 7:



<http://www.instructables.com/id/Shoebox-Camera/?ALLSTEPS>