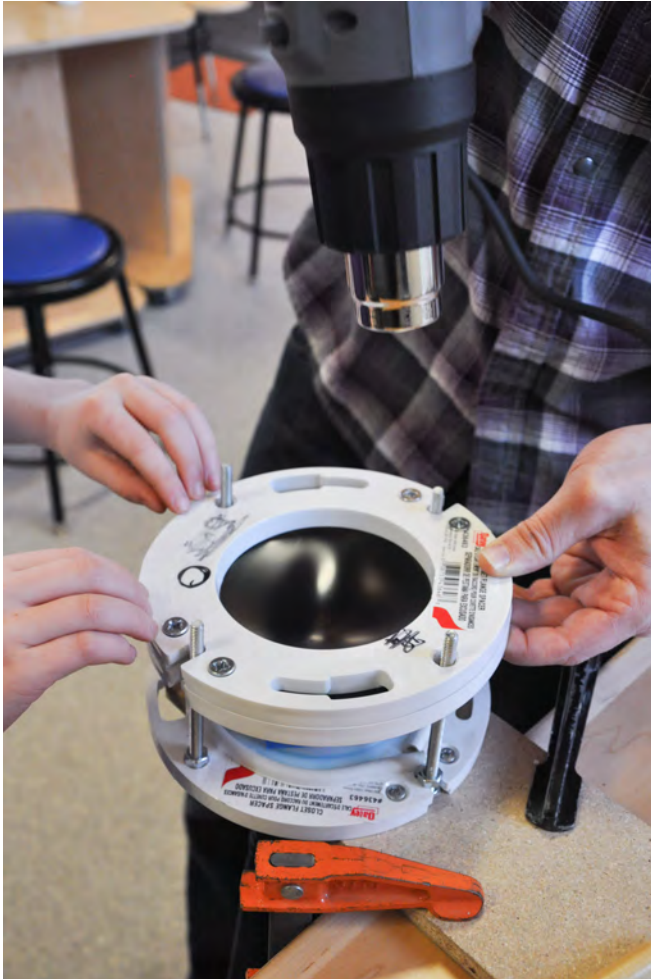


New Art Forming-An exploration in printing and mold making.

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This project was originally inspired by the “very simple vacuum former” design by **ekpuz** on [instructable.com](https://www.instructables.com/). Above is a slightly modified version of the vacuum former that we used during a class project to make molds of 3D printed forms and then cast in chocolate.

Supplies

and

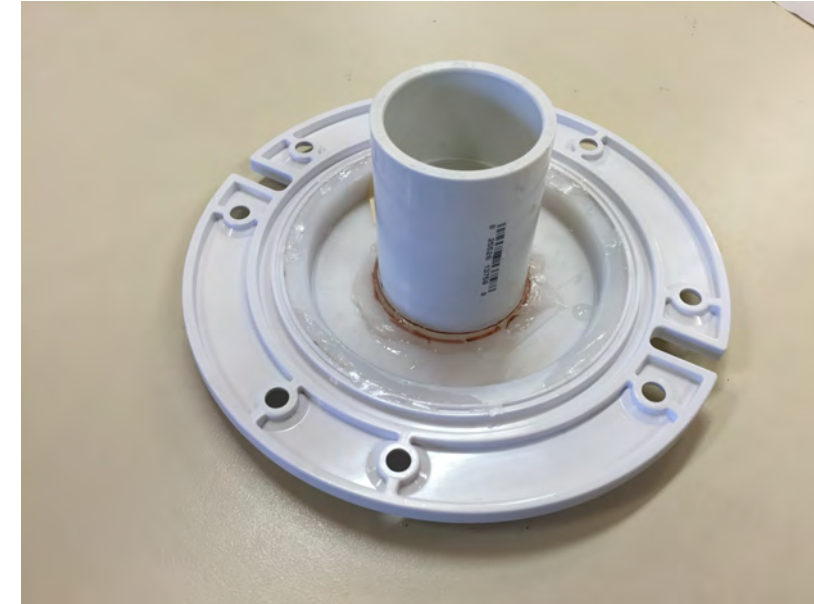
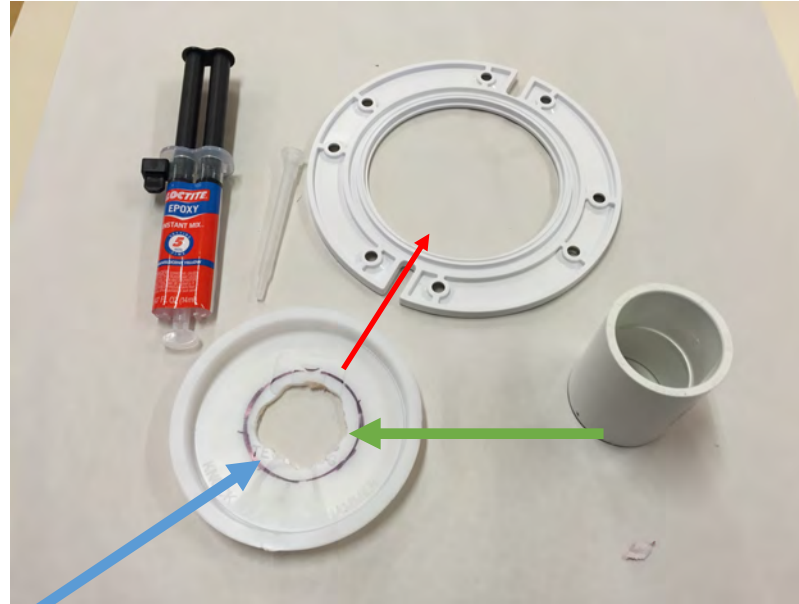
Tools

- (a) 4 - 4" x 1/4" bolts
- (b) 4 - 1/4" hex nuts
- (c) 3 - 1/4" Flange extension ring. (home depot [model 886-RQ](#)),
- (d) 1 - Test Cap (from [grainger.com](#)) [Test Cap, 4 In Hub Item no: 1WHT5](#)
- (e) 5 minute epoxy
- (f) About 15" of [silicone rubber window seal](#) (not the open cell foam kind)
- (g) 1 - 1 1/2" pvc bushing. Should roughly fit your vacuum hose.
- (h) 3 medium binder clips
- (i) 2 5" x 5" pieces of aluminum window screen
- (j) Masking tape

- (a) Heat gun
- (b) Vacuum [not pictured] preferably something with a higher suction. A home vacuum will work fine!
- (c) Drill with 1 1/4" bit
- (d) Scissors
- (e) Adjustable wrench
- (f) sharpie



Step 1. Make the base plate. Drill hole in test cap and glue to one of the flanges. Glue bushing onto test cap.

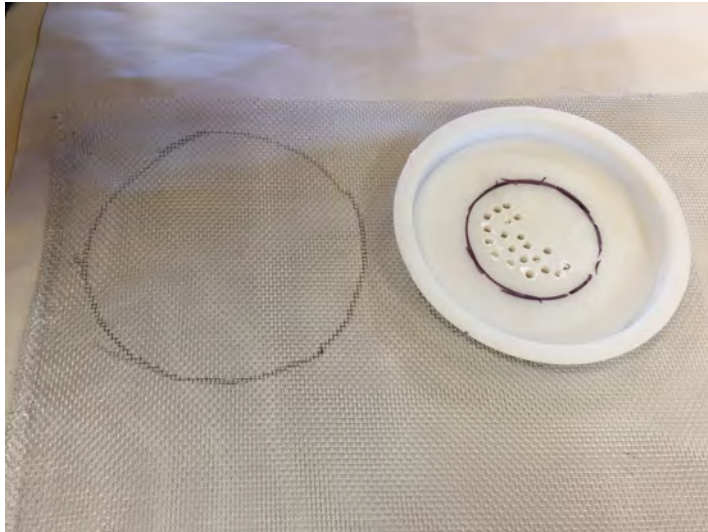


1. Trace bushing onto test cap so you leave enough space to glue edge of bushing onto your test cap. This is where the vacuum is attached once the former is complete.

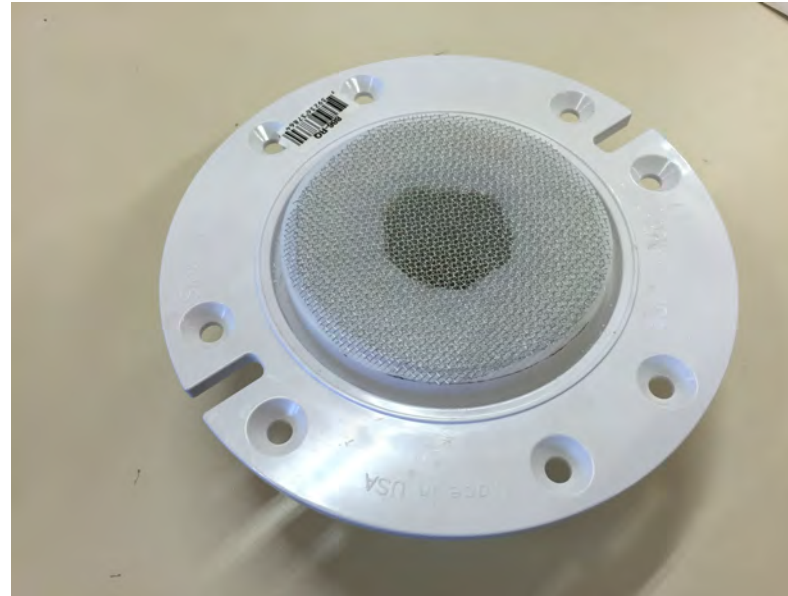
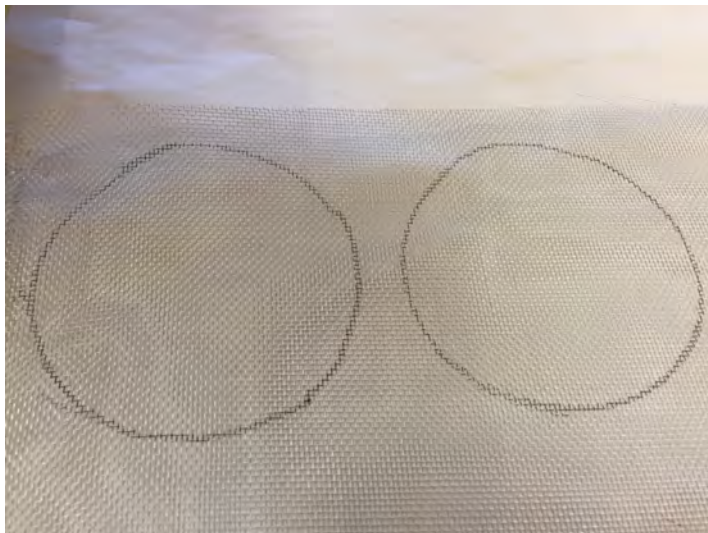
2. **Glue test cap onto flange.** Let them set (should be quick with 5 minute epoxy), **then glue bushing onto the test cap.**

3. Finished base plate. I glued the test cap into the flange so it poked through and glued the bushing on the underneath of the test cap. (view of the bottom of base plate.)

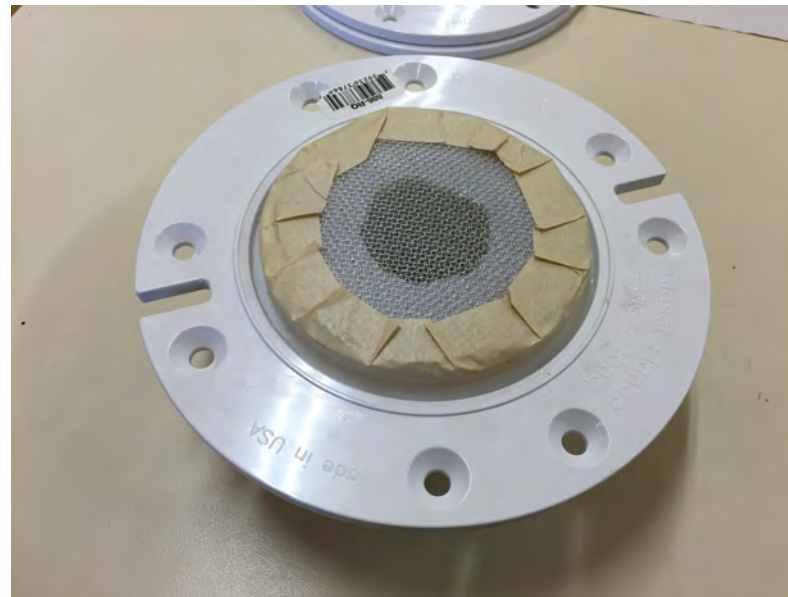
Step 2. Cut screen and add to top of base plate.*



1. Trace 2 4" circles on the aluminum mesh.

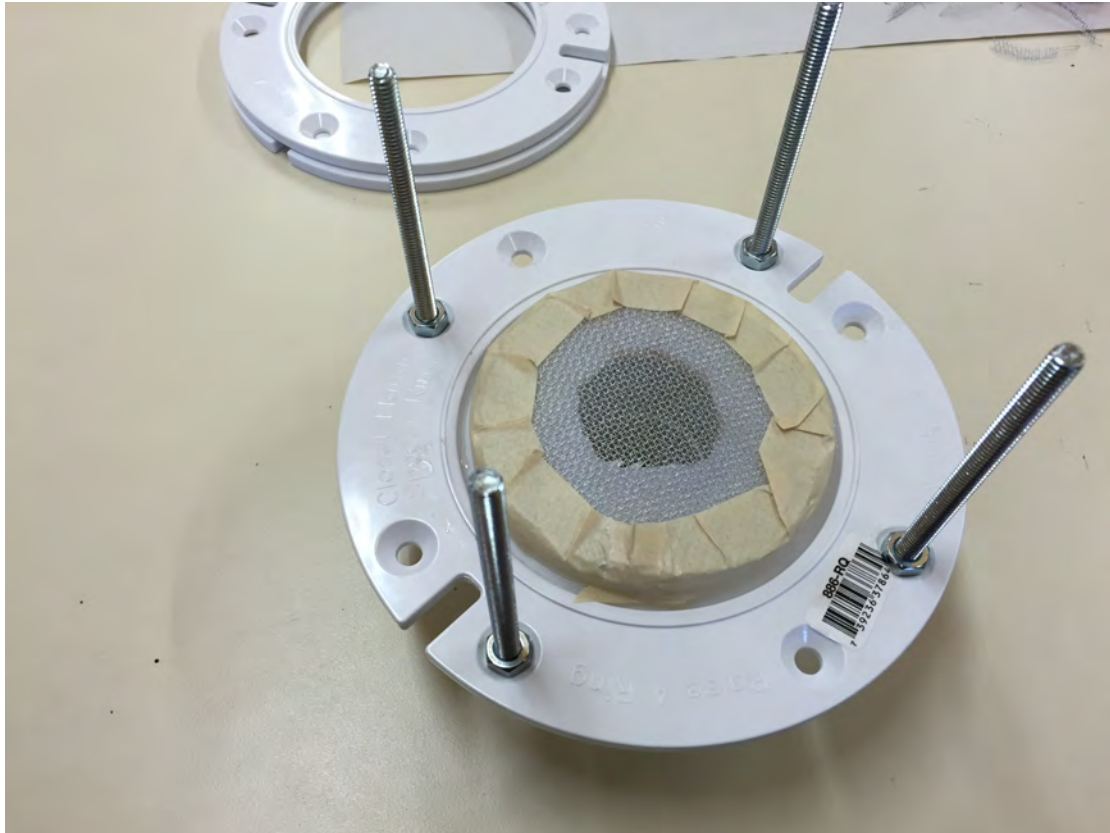


2. Attach screen to the top of base plate at alternating directions.



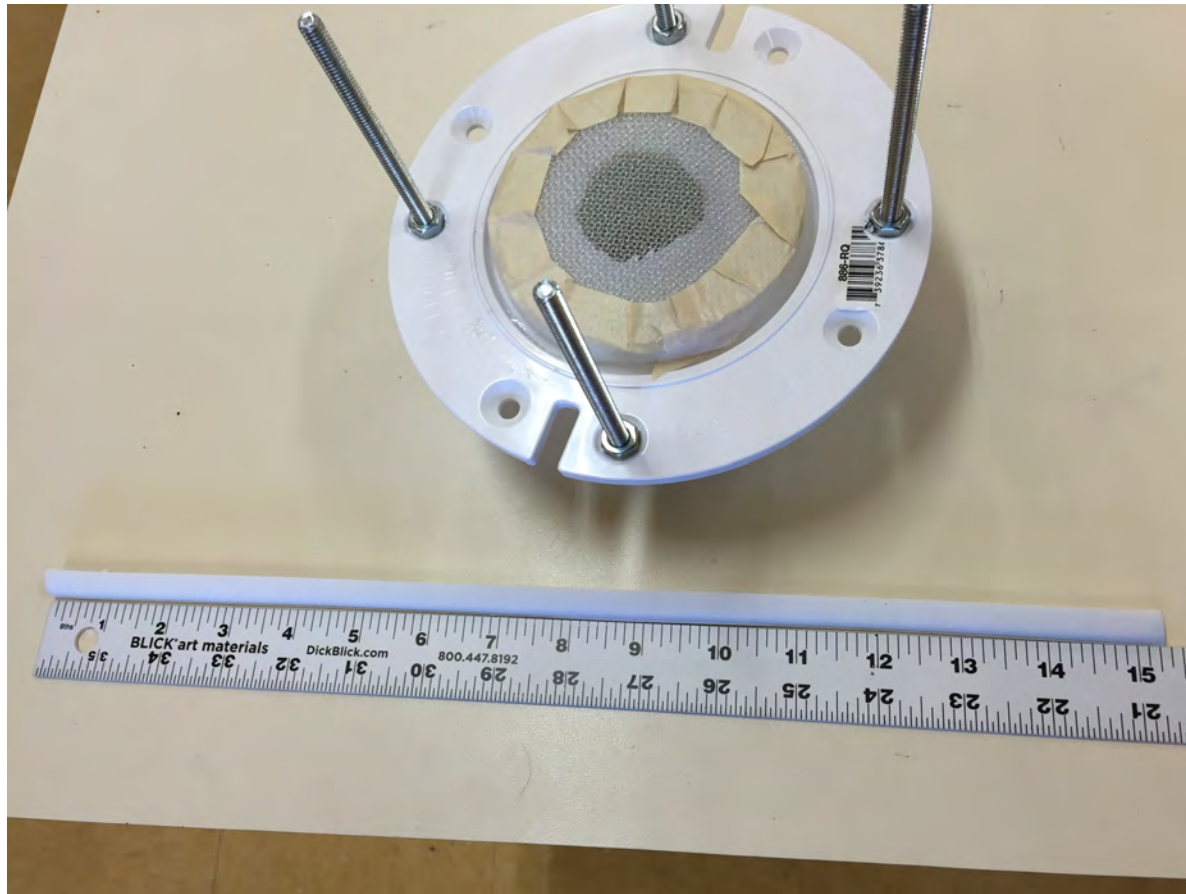
*You can also attach a perforated plate on top of the screen to give a sturdier place to put forms to mold. You can use a piece of thin wood with a bunch of holes drilled in it or even a perf. board for electronic prototyping.

Step 3. Attach bolts to base plate.

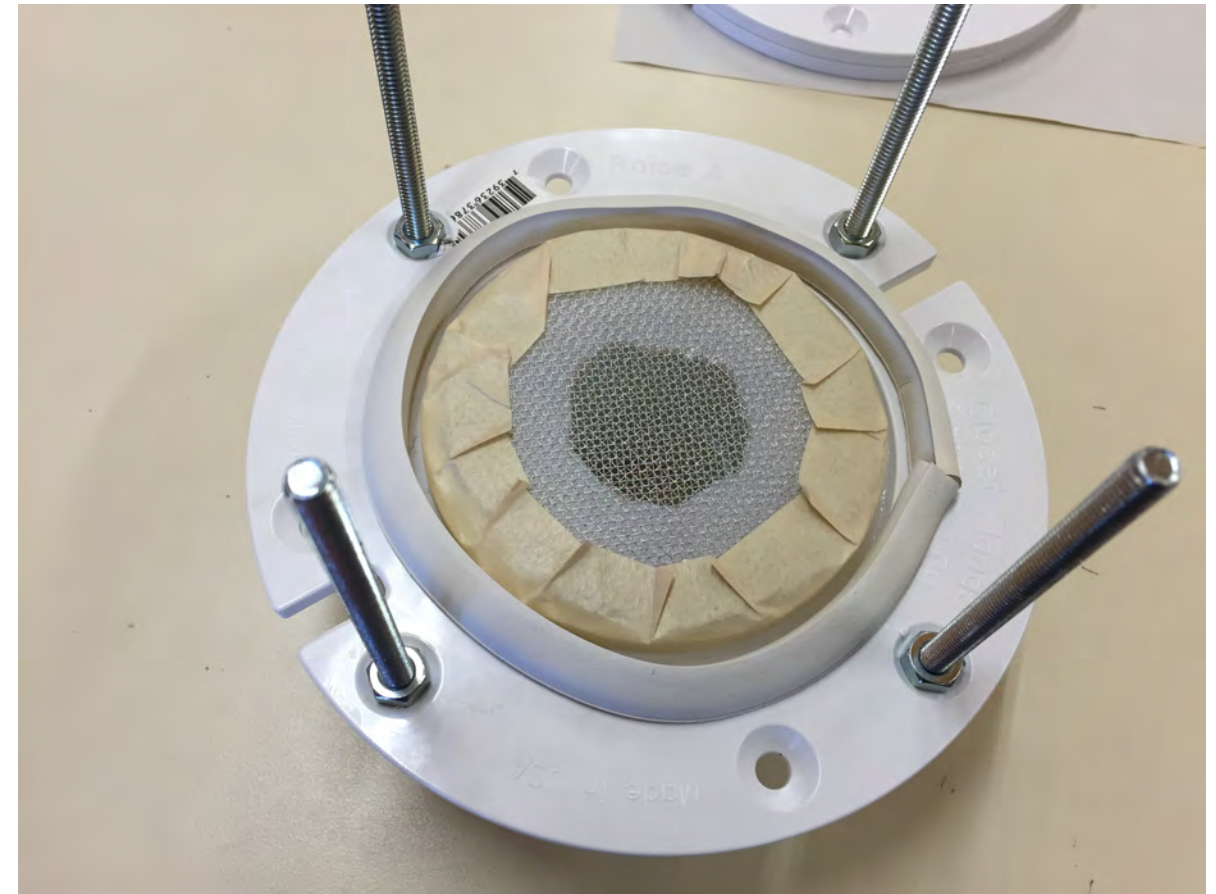


Threads should be pointing up. This is how you will slide the heated plastic down onto the form.

Step 4. Attach weather stripping to base plate

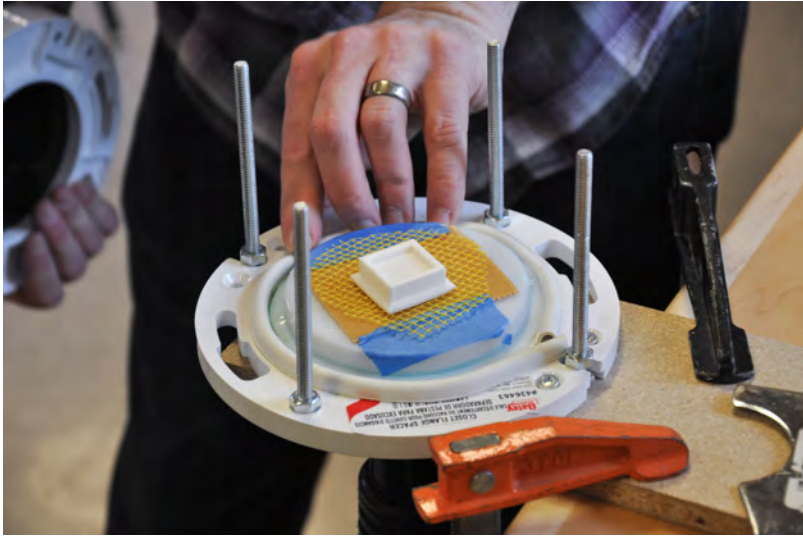


1. Measure 15" of weather stripping. It is important it is not the open cell foam because that will prevent a vacuum from being formed between the plastic and base of the former.



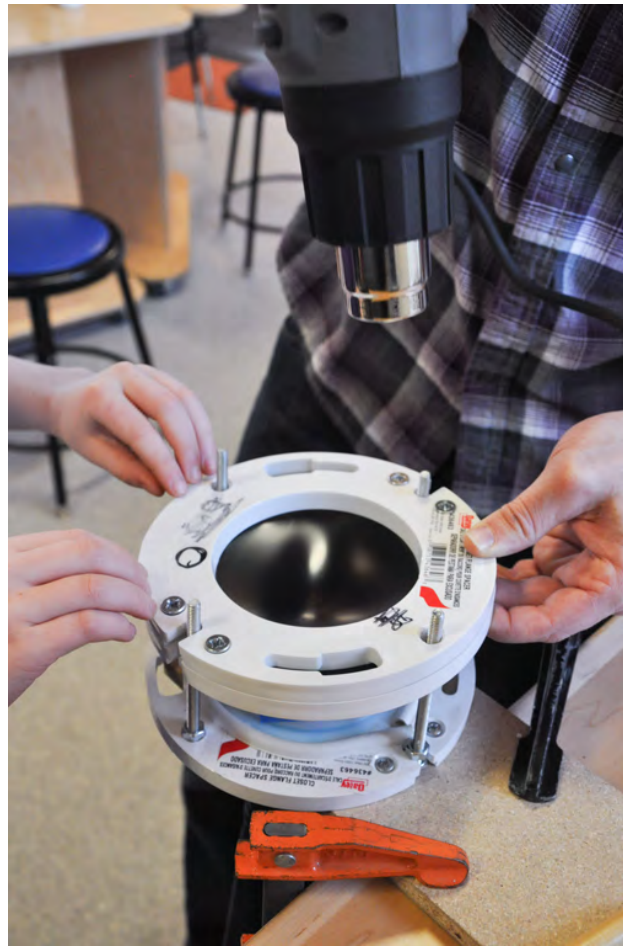
2. Attach the stripping to the base plate. If the stripping isn't sticky enough, use double stick tape. You're finished! Let's get a plate, hook up a vacuum and start forming!

Forming



Set plastic* between raining flanges and hold together with binder clips. Align the holes with the bolts in the bottom flange with the open holes in the flanges being used a frame to hold the plastic.

*Use High Impact polystyrene (HiPS). It is paintable, food-safe, inexpensive. You can order sheets from Amazon and find poly styrene plates from most



Heat the plastic about 6"-8" away with heat gun, moving in a circular motion. Plastic will wrinkle, tighten and then sag.



Turn on vacuum and slide frame quickly and firmly press down on frame on either side creating a seal. You will quickly see the plastic form around the form on the plate.