

Shoes...

Never in my mind did I imagine myself sitting down with a cup of coffee to write a tutorial on making a shoe! But here I am, a lovely breakfast and coffee by my side thanks to my dear husband...who by the way, when faced with the question "do you mind picking kids up at school, making dinner and putting them down for bed so I can make shoes" does not think I am crazy. He simply says, "sure, have fun!" And then at some point during the night, shows up in my studio with a pot of jasmine tea, perfectly sweetened with honey. So thanks Chris, for being Project Create Recklessly's biggest fan and supporter!



Okay, back to shoes...I talked a bit about working with leather on my blog, so lets just jump right into a step-by-step. The text in *italics* outline mistakes I made along the way...so you don't make the same ones when you make YOUR shoes. (Come on, you know you want to!) I also listed all supplies/resources at the end.

STEP 1: CREATE A "LAST"

A last is a shoe form you design your shoe around. (Thanks to Master Cobbler Terry Moran from Your Master Cobbler in Bothell, WA for the quick primer on shoe making). Not having one available, I came up with my own way of creating a "last."

1. Go to your local thrift store and buy a pair of shoes. Select a pair in your size, with the height of heel you want and with the basic features you want (open vs. closed toe, straps vs no straps). The shoe should be as plain as possible so you can create a form to work on.

2. Take apart one shoe, cutting off all of the upper material and sawing off the heel. Use a razor blade to cut the lining on top of the sole off. When you are done deconstructing the shoe, you should have a plain, heel-less sole and a cut out insole that is an exact template of the sole.



My first mistake was buying a pair of shoes that were dramatically different than the style I wanted to emulate. I tried to use duct tape to turn one of the shoes into a "last" (above) but it was bulkier than an actual shoe. I ended up using one of my favorite shoes as an upper template, and the sole from the Goodwill shoe that I had cut apart for the sole template. This made it a little more complicated since I had to them match the upper template to the sole template, which were built off of two different shoes...but I eventually got everything to line up. You'll save yourself this hassle if you start with a pair of shoes that closely match your end design goal.

STEP 2: FORM YOUR SOLE

Faux Bone is a special type of rigid PVC developed for art use by Robert Dancik. It does not outgas (produce fumes) when heated below 290 degrees, but it is malleable at 240 degrees. This allows you to create a solid, nearly unbreakable sole formed perfectly to your template. I wear a size 6.5, and I was able to have just enough material on an 8X8 sheet of Faux Bone when I worked corner to corner. If you have a larger shoe size, you will need to contact Robert about ordering a larger piece. You can find out more about Faux Bone at www.fauxbone.com.

1. Trace the cut out insole onto a piece of 1/4" thick Faux Bone. Use a jeweler's saw with a medium Faux Bone blade or a jig saw to cut out the form.

2. Refine the shape using a belt sander or a barrel sander on a handpiece.

3. Place in a toaster oven set for 255 degrees for a few minutes, until it is floppy like a thick lasagna noodle. Wearing light cotton gloves, remove the Faux Bone from the toaster oven and lay it onto the sole template. Hold the piece down against the sole as it cools, making sure it is aligned and laying flat against sole. You can run the whole thing under water to cool it faster, if desired.

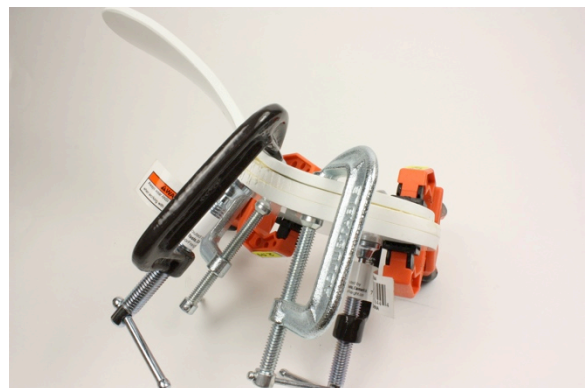
4. If you want a platform for the front of the shoe, trace the front third of the insole onto 2 pieces of 1/4" Faux Bone (or use a 1/2" piece and skip #5), cut out and refine the shape as you did above.

5. Use Gorilla PVC Cement (not related to Gorilla Glue products – I prefer this PVC glue as it does not have fumes, is not flammable and is the greenest PVC glue available) to glue the two pieces together, using clamps to hold the pieces together tightly until the glue is dry (about 60 minutes). Be sure to wipe off any glue that oozes out between the Faux Bone layers.

6. Use sandpaper or a belt sander to make sure the front bottom of the shoe is completely flat.

7. Once the PVC Cement on the platform is dry (make sure it is dry! Do not heat wet cement), place the platform in the toaster oven at 255 degrees. It will take a little longer to heat since it is so thick. Once heated, glue it to the front of the sole, using clamps to hold the pieces together tightly until the glue is dry (about 60 minutes).

8. Once the glue is dry, remove all clamps and refine the shape with a belt sander or barrel sander on a handpiece. If desired, sand the back of the platform so that it curves up in the same angle as the sole. You can also put decorative textures on the platform and the edge of the sole, if desired. I used the edge of a small barrel sander to create grooves around the platform.



9. I used Adirondach alcohol ink to dye the Faux Bone and sealed it with 2 coats of “Preserve Your Memories II” sealant (most spray sealants have alcohol in them that reactivate the alcohol ink, running it). Lots of texture on your Faux Bone will help the ink adhere better. Once sealed, I resealed it with a matte Krylon acrylic sealant for extra durability. Other paint on sealants will also likely work.

My mistakes - I did not have enough clamps, and not one that had a deep enough throat, to thoroughly clamp down the back center of the platform so it ended up having a gap there. I simply used plastic epoxy putty, available at any hardware store, to fill in the gap. It dries off white, but I knew I would be dyeing the platform black so I wasn't worried about the color.

STEP 3: FORM YOUR HEAL

1. Use a piece of 1/2 “ thick Faux Bone, cutting it to the width you want your heal. I used the Faux Bone ring blank which had circles already cut out. Refine the shape with a belt sander or barrel sander on a handpiece.

2. Use a belt sander or barrel sander on a handpiece to sand the end of the Faux Bone so the angle matches the angle of the sole.

I winged this...although I contemplated using clay to make a fake heel and then using that as a template for the angle and length of the heel.

3. Drill 3-4 holes in the top angled part of the heel that are slightly smaller than the screw you will be using. Make sure to not line all the holes up in a straight line. your heal will be more stable if you have screws on different planes.



It would be easiest to drill the holes through the sole and heel at the same time, but I could not manage it. Instead, I drilled the holes in the heel, then placed a piece of painters tape over them, trimming the tape so it matched the top edge of the heel. I used the edge of an Exacto knife to cut out the holes in the tape and used this as my template for holes on the sole.

4. Drill matching holes in the sole, MAKING SURE the holes are angled to match the holes in the heel. Countersink the hole so that screw can lay flat. Line up the sole and the heel and place wood or metal dowels in all the holes except one, helping keep everything aligned as you put in screws.

I made the mistake of not angling the holes in the sole, I just drilled straight down, so my heel was skewed inwards at first. I also didn't countersink the hole so I tried to sand the heads of the screws as flat as I could, but they still stood up a bit.

5. Use an embossing heat gun to heat one of the holes. Be careful not to burn/melt the Faux Bone. Once softened, quickly screw in the screws between the two layers. The screw should insert easily as the Faux Bone is hot, allowing it to thread. If it starts to get hard to screw, try heating the Faux Bone again.

I made the mistake of putting PVC glue between the heel and sole. I was uncomfortable heating it with the wet glue there (and didn't want to wait an hour to let it dry), so I inserted the screws in cold and ended up breaking the head off of one of them! If you do want to use glue between the sole and heel, let it dry thoroughly so you can apply the heat to the holes.

6. Place the shoe on the edge of a table to see where you need to cut the heel so it can stand flat. Cut the heel a little longer than it needs to be and then use a belt sander or barrel sander on a handpiece to shorten it a little at a time until it is just right. If the heel is not the right length, you will feel the shoe flex as you walk.

7. **Making the second sole:** I've not made mine yet, but I plan on flipping the Faux Bone sole over before I press it onto the sole template. The edges will hang off a bit, but the overall curve of the shoe should match. I would also put non-skid tape on the bottom of each sole and the end of the heel.

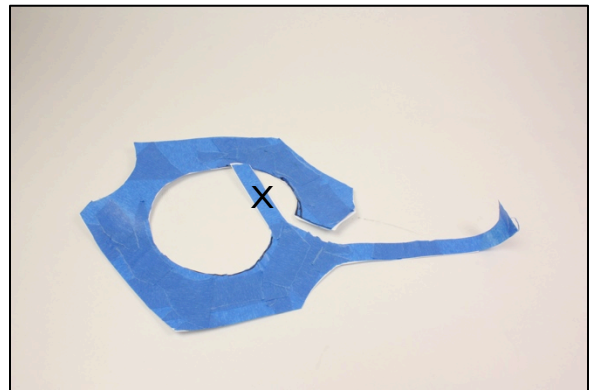
STEP 4: DESIGN THE UPPER

There are many materials you can use for your upper (faux leathers, fabric, etc), these instructions are for using 1/16" thick vegetable tanned leather.

1. Use painters tape to create a tape upper on your shoe. This is where you get creative! Do you want shoes with angular features, something that has flowing curves, lots of straps? Whatever you want, put it here! Make sure the tape extends to the bottom edge of the sole so that you can have a way to attach the upper to the sole.



2. Once your design is done, cut the tape in one place. The goal is to have the template be one piece that butterflies open. That way, it will take shape around your sole and you will just have to sew it in one place. I chose to put my seam just below my ankle (although I wished I had done it on the inside of my foot rather than the outside).



3. Carefully remove the template so that it stays one piece. Once you've opened it flat, you will be able to see which pieces cannot be part of the one-piece base. For example, my strap (X) needed to be a separate piece as when opened flat it crossed over the base. Cut off any pieces that you will need to cut separately...there is a good chance if your design is simple that you won't have to do this.

4. Place the template on the BACK of the leather and use the leather shears to cut it out. You are putting it on the back of the leather because the template was built for one foot, and the sole was built for another foot...so you need to reverse it so that it is for the same foot.

5. Once cut, form the leather around the sole to test and see everything fits. I taped mine on, but just be aware that the tape will affect the finish of the leather. So if you are not going to texture/alter the leather, do not use tape. If the fit is not right, use tape to extend the upper where need, or trim the upper as needed and then use this as your new template (as I had to do).

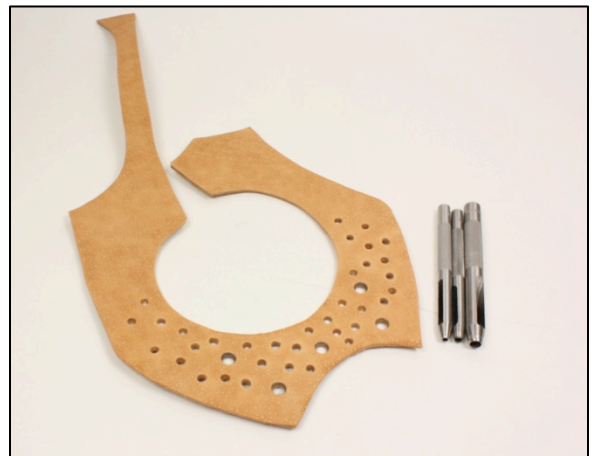


STEP 5: DECORATE THE UPPER

1. Stamp texture into your leather by spraying it with water and using leather or metal stamps and a hammer to stamp in texture. You will need less force than you use when stamping metal. Work in sections, spraying as you go.



2. Punch holes in the leather using punches. I punched 3 sizes of holes from the front so that I could set in 3mm, 4mm and 6mm crystals. Punch from the front if you want the hole to graduate from larger to smaller, punch from the back to have the hole graduate from small to larger.



3. Color the top and edges of the leather by using acrylic paint (or acrylic shoe spray paint available at many cobbler shops) or by dyeing it with alcohol ink. There are also many types of leather dyes you can use.

4. Using leather glue, glue a piece of thin neutral colored material (so you don't see the color through the crystals) on the back of the leather, leaving margin of leather around the material so that you can glue the lining in later.



5. From the front, sew crystals into the holes and onto the fabric. I found regular thread often broke on the edge of the crystal so consider using Fireline or other crystal appropriate thread.

STEP 6: APPLY THE LINING AND INSOLE

1. Lining: Use a foam paintbrush to cover the entire back of the upper with leather glue and lay the piece down flat on a piece of microsuede. Turn the upper over so the microsuede is facing up and use a roller (such as a piece of PVC pipe or polymer/PMC clay roller) to roll the suede flat. Let dry and trim the excess.
2. Insole: Roughen the surface of the sole with sandpaper well. Use white glue (I used Crafter's Choice) and glue microsuede to the sole. After drying, trim so that the insole extends between 1/8"-1/4" all around.

STEP 7: ASSEMBLY

1. Attach any snaps, eyelets or other closures where desired using leather tools (see resources).

2. Use a leather lacing punch to punch holes at the seam. Lace the seam together using waxed linen. Paint/Dye the thread if desired.



3. Punch or drill holes for small microscrews along the bottom edge of the upper as desired so you can attach it to the sole.

4. Align the shoe loosely on the sole. Drill a hole (just slightly smaller than the screw) through a hole in the upper, into the Faux Bone sole and through the overhang of the insole. Remove any Faux Bone debris from drilling, heat the hole only (not the leather) with an embossing heat gun and screw the screw in. Since the hole is shallow, it will not take much to heat it. Repeat, making sure to alternate putting in screws from one side to the other, constantly checking that the leather upper is aligned and the insole is being screwed in between the upper and the sole.



5. Trim any excess insole using an Exacto knife (either in areas where there is no upper attached to the sole or if there is any extending past the edge of the upper.)

6. Create and attach straps as desired.



SUPPLIES & RESOURCES

As a former bead store owner, I can't urge you enough to support your local bead and jewelry supply stores. However, as a teacher, I recognize that without the proper tools and supplies your creative endeavors can be limited. So as you start your next project, be sure to check your local stores first, but when supplies come hard to come by, try these great online resources.

General Jewelry Supply Tools – Rio Grande - www.riogrande.com

Brass hammer
Sandpaper, asst'd grits
Belt sander or barrel sander on a handpiece
Jewelers saw or band/scroll saw
Drill bits with handpiece an/or drill press

Faux Bone – Crackerdog Designs - www.FauxBone.com

3-4 8X8 sheet 1/4" Faux Bone sheet (or custom order a larger sheet if you are larger than size 6.5)
1 – 8X8 1/2" Faux Bone sheet, or 1/2" ring blank
Medium Faux Bone saw blades
Adirondach inks

Leather – Tandy Leather – www.tandyleatherfactory.com

Vegetable tanned leather – mine was about 1/16" thick
Waxed Linen
4 - #20 snaps and snap setting tool
6 wide lacing punch tool
Leather texturing tool
Hole punches – also available at Harbor Freight
Leather shears
Leather glue – white, not contact cement type

Crystals – Fusion Beads – www.fusionbeads.com

90 - 6mm, 4mm and 3mm rounds/bicones
Colors include: crystal, aqua, light Sapphire, erinite, silver shadow, gold shadow, indicolite, Pacific opal

Microscrews – Microfasteners – www.microfasteners.com - 60 microscrews

Gorilla PVC Glue – www.gorillaPVC.com - They do not sell directly, search for it online

Preserve Your memory II – sealant – www.precision-blue.com

Dick Blick – www.dickblick.com - Golden brand silver iridescent acrylic paint/foam brush

General Hardware – Ace Hardware

3-4 large flathead screws – depends on design of heel
Painter's Tape and non-skid Tape
Toaster Oven
Clamps
Matte Krylon clear acrylic spray
Craft/Hobby knife (Exacto knife)
Scouring pads

Joann's Crafts

Embossing heat gun
Needle and Thread
Thin fabric for crystal backing and microsuede fabric for lining
Crafters Choice white craft glue for insoles – sticks well to plastic