



Forging with Clay

Family Art Day Project

This winter, PenArt is having an online exhibition of work inspired by Family Art Day projects! *Kids Create* will go live on PeninsulaSchoolofArt.org on March 1, 2021. To be part of it, take a picture of your creation and submit it at bit.ly/enter-kids-create



Peninsula School of Art

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Artist Spotlight



Dan Nauman

[Dan Nauman](#) is a blacksmith. In his forge in Kewaunee, WI, he has a coal fire that he uses to heat bars of steel so he can hammer and bend them into different shapes on an anvil. This process takes time because the iron cools quickly after it is taken out of the fire and may need to be heated again and again.

Before factories, there was a blacksmith in nearly every town. They made tools, household objects, weapons, and armor, among other things. Today, Dan designs and makes gates, railings, door hardware, furniture, lighting, fireplace equipment, and sculpture. He uses traditional techniques to make this art.



Console Table, 2015. Forged mild steel, copper, and marble. Natural beeswax finish. 14 x 18 x 25 inches.



Console Table, 2010. Forged and fabricated mild steel and glass. Monochrome paste finish. 18 x 33 inches.

Blacksmithing Techniques

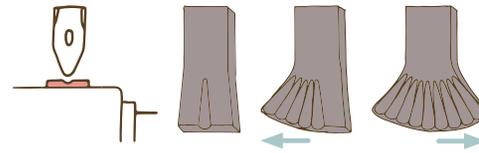
Drawing Out

Making a piece of metal longer and narrower. Forge the end of a rod into a square, working from the start of the taper toward the tip. Repeat the process, each time starting closer to the tip. When you have the length you want knock down the corners, making the square into an octagon. Finally, round it out by rotating it and gently tapping.



Spreading

Making a piece of metal wider and thinner. With the narrow side of the hammer lined up with the length of the metal bar, hammer the middle. Then work from the middle toward one edge, and then from the middle toward the other edge.



Planishing

Smoothing the metal with repeated, light, overlapping hammer strokes.



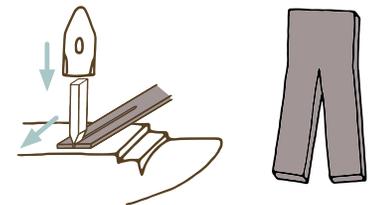
Upsetting

Making a piece of metal thicker and shorter by hitting or ramming it on end.



Splitting

Dividing the metal with a chisel.



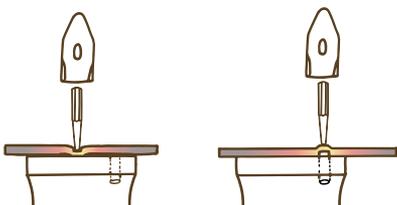
Which parts of the tables pictured here might Dan have made using each of these techniques?

More →

Blacksmithing Techniques

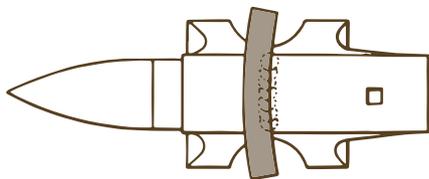
Punching Through

Making a hole in a piece of metal. First make a dimple on one side. Then punch through from the other side into the hole in the anvil.



Straightening

Straighten a wide bar of metal by hammering along the inside edge of the curve. You can also curve a straight bar by hammering along the outside edge.



Welding

Merging two pieces of metal by heating and hammering together.



Twisting

The twist is tighter if the metal is hot.



Curling

Either make a bend near the tip then hammer it back toward the rest of the metal, or heat the tip and push it into the anvil.



Your turn!

This kit includes Sculpey clay; a foam block to act as an anvil; and a wooden cross pein hammer, chisel, and punch.

Before starting, put down tinfoil or wax paper to protect your table. Knead the clay and shape it into rods and bars to act as your metal—hot iron moves just like stiff clay! If your “metal” is too soft, put it in the fridge for a while. Use the forging techniques to shape your “metal.”

When you are happy with the results, have an adult bake it on an oven-proof glass or metal surface at 275°F for 15 minutes per ¼ inch of thickness. Do not microwave or overbake. Wash your hands after working with the clay.