

Leathercraft 101

HOW TO WORK



WITH LEATHER

By

Randy Cornelius



Some information about me:

I grew up on a farm and my family showed horses since I could remember. I learned leather repair from my father as we always tried to do most of our own tack repair. When I went to grade school, I had an art teacher who had a 6 week course in leathercraft. There I made my first set of saddle bags, and I was hooked. My parents got me a Tandy Leathercraft kit for Christmas that year and the rest is history. I always made my own belts and wallets. I then started making things for the rest of my family and friends. Word soon got out and I started making things for other people. When cell phones came along, I hated the cheap holders that came with mine, and made myself a leather cell phone holster for my belt. Everyone saw it and wanted one and that is how my leather business was born. I started working off the kitchen table, then moved to a corner in the basement. I then took the whole basement, and finally built a 30 x 40 shop that I now run my leather business out of.

I have always been basically self-taught starting with books, kits and then later with videos that I could buy from Tandy. Then the internet came along and I found there were others like me, who wanted to share their knowledge through the internet. There were classes I could go take, competitions I could enter and trade shows to go to. Being a Leather Worker is an ongoing learning experience, I am always seeking out the knowledge from others and in turn try to teach what I know to others like you. I hope that you learn something you can do for a lifetime like me and have a hobby you can enjoy. I hope you share what you learn with others too.

Randy

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This class is designed for a four-week course, four hours per class for a total of 16 hours of instruction. Students are asked to bring with them the following items to each class:

- Small jar of rubber cement, (this can be purchased at Walmart in craft dept.)
- 2-#2 lead pencils or a mechanical pencil
- Scissors
- Roll of blue painter's' tape 3/4" wide
- 12" ruler

Week one:

Brief introduction to leather:

Where does leather come from and how is it processed?

Leather is a by-product of the beef industry. Cattle are raised for meat. Cattle are brought into the meat processing facility where the skin of the cow is removed. The hide is then salted, folded, and placed on pallets to be shipped to a tannery. The rest of the carcass is processed it into steaks, roasts, and hamburger.

Vegetable tanned Leather:

Method of tanning which utilized materials from organic materials such as bark tannins. Vegetable tanning takes longer to produce and has greater body and firmness than chrome tanned leather. A lot of vegetable tanned leather can to be tooled- but not all. Look for "Natural Veg tan" or look for terms like "Tooling Leather" if you want to carve your leather.

Chrome Tanned Leather:

A method of tanning leather in which chromium salts are used. Chrome tanned leather are often softer, more mellow and pliable than Vegetable tanned leather. This method of tanning is faster than Veg tan.

Grading Leather:

Vegetable tanned leather is often left in its natural state and therefore you can't rely on coloring, decorations or other alterations that can hide skin imperfections. So, tanneries grade their leather to let customers know which leather has the fewest imperfections. The grader is primarily concerned with cosmetic issues like brands, scratches, insect bite marks and scars to name a few. Most tanneries will grade their leather with an "A", "B", "C" grade and so on. You know if you buy an "A" grade you are buying the best quality that the tannery has at that time.

Buying Leather:

Leather is sold by the whole side, half side or by the square foot. You can also buy a back, double bend, single bend, Culatta,(1/2 of one side, butt section) double shoulder, single shoulder or belly. Some companies will cut leather to your specifications. Others will sell it only by the side. From some companies you have to buy 10 side minimum, others just one side at a time.

Leather Thickness:

Leather is sold by a thickness called Ounce. See chart that is attached. 1oz leather is 1/64" of an inch thick or 0.016" or 0.4mm thick. 8 oz leather is 1/8" or 0.125" or 3.2mm thick. When buying from overseas companies it will be in millimeters.

Leather Conversion Chart				
Weight		Thickness		
Ounces	Inches	Decimal (in)	Millimeters	Irons
1	1/64	0.016	0.4	0.75
2	1/32	0.031	0.8	1.5
3	3/64	0.047	1.2	2.25
4	1/16	0.063	1.6	3
5	5/64	0.078	2	3.75
6	3/32	0.094	2.4	4.5
7	7/64	0.109	2.8	5.25
8	1/8	0.125	3.2	6
9	9/64	0.141	3.6	6.75
10	5/32	0.156	4	7.5
11	11/64	0.172	4.4	8.25
12	3/16	0.188	4.8	9
13	13/64	0.203	5.2	9.75
14	7/32	0.219	5.6	10.5
15	15/64	0.234	6	11.25
16	1/4	0.250	6.4	12

standard term for the thickness of leather is ounces, but

Leather Thickness

The measurement of the thickness of leather is measured in several formats:

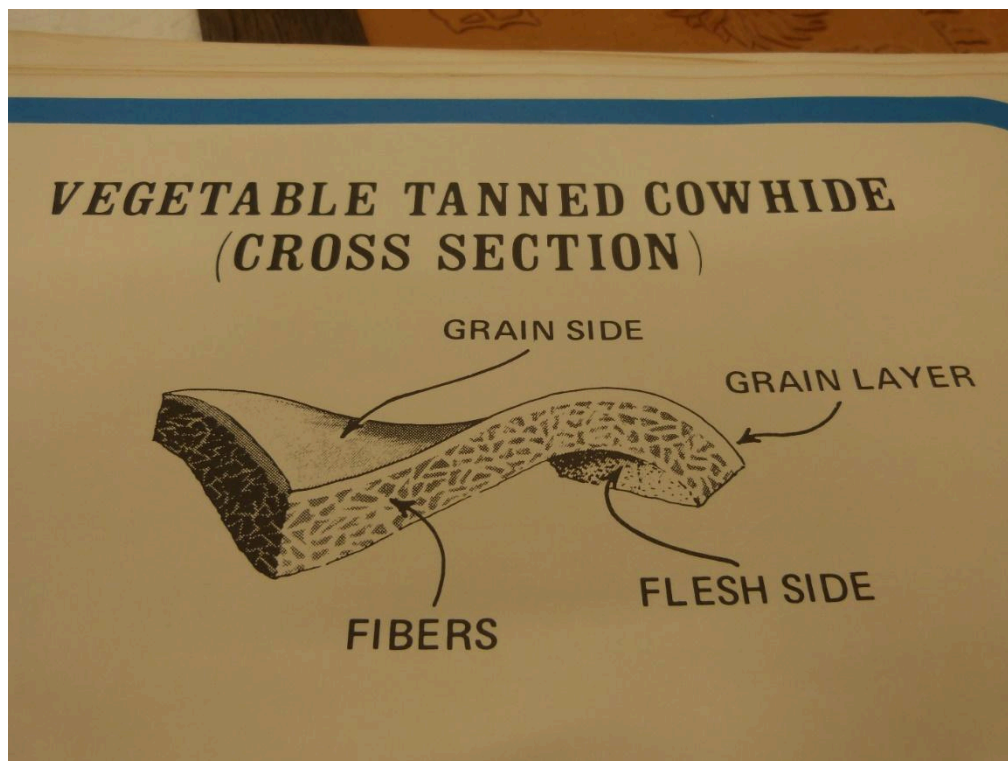
Ounces (1 ounce = 1/64 inch)
Millimeters (1 mm = 0.03937 inch)
Irons (1 iron = 1/48 inch):

The Leather Conversion Chart shown here should give you a pretty good idea of general leather thicknesses.

oz	mm
2-3	0.8-1.2
3-4	1.2-1.6
4-5	1.6-2

There are two sides to leather. The top is the smooth side called the “Grain Side”; this is the side that had the hair on it when the cow was alive. The bottom is called the “Flesh Side” and was the side next to the flesh and muscle of the cow.

An in-depth explanation of all the different types of leather is a whole other class on its own. For this class we will be focusing on Vegetable Tanned leather that we can carve and tool.



Getting Started tooling leather:

Step 1:

Tracing the pattern onto transfer film. The pattern we will be using is on the next page. It is a rounder or coaster. It is a 4” circle. We will be using “Transfer Film” to transfer the pattern to the leather. Lay the transfer film on top of the pattern and trace all the lines.

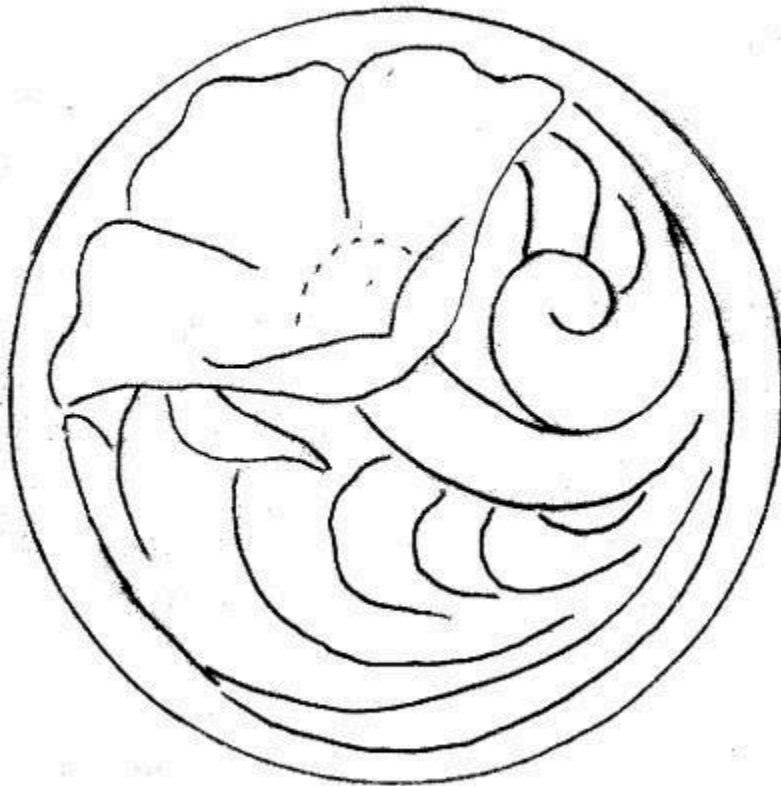
Tracing the pattern:

When you are carving leather, you should have already prepared a pattern on “Transfer film”. I first draw my designs on “Velum Paper” that is somewhat transparent. This way I can transfer other patterns and make changes and erase and

correct things. Books can be purchased that have ready pre-drawn patterns for common items. Also, kits will contain tooling patterns for the items in the kit.

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Next, trace onto the transfer film, it is a plastic like film that you can mark on with a pencil. This can be purchased from most Leathercraft supply companies. I like to tape the transfer film to the pattern so it does not move on me.



Step 2:

Glue the leather down with rubber cement to a firm surface.

Leather, when wet, can be molded and shaped, but as we are tooling it, we do not want it to lose its shape so we need to glue it down to a hard surface. I like to use plexiglass, but you can use Masonite or any other material as you wish.

Put a thin coat of rubber cement to the flesh side of the leather and to one side of the backing material. Let the cement dry until tacky and then lay the leather

on the backing and press firmly together. This will bond the leather to the backing and this way it will not move, curl or lose its original shape while tooling it.

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Step 3:

Wet it.

In order to carve or stamp leather it needs to be wet. Leather will soak up water like a sponge so be careful not to put too much water on your leather. I like to wipe it on with a sponge and stop at the point the water just starts to pool on top of the leather. The water will darken the leather. Lay it aside for a few minutes to let the water soak in and it will return to a natural color, now you are ready to carve.

Step 4:

Lay the transfer film with your traced pattern on the wet leather. Make sure you center it so the lines do not run off the edge of the leather. I like to tape my pattern down after I get it lined up so that it does not move on me as I trace. Lightly trace the lines. You do not have to use a lot of pressure; you can lift up an edge to check to make sure your lines are being transferred onto the leather.

Step 5:

Carving and stamping the leather.

Basic 7 tools we will be using:

- Swivel Knife
- Camouflage
- Pear Shader
- Veiner
- Seeder
- Backgrounder
- Along with a mallet and a tooling surface.

Swivel Knife:

Is used to make cuts in the leather but only cut 1/3 to 1/2 way through the leather.

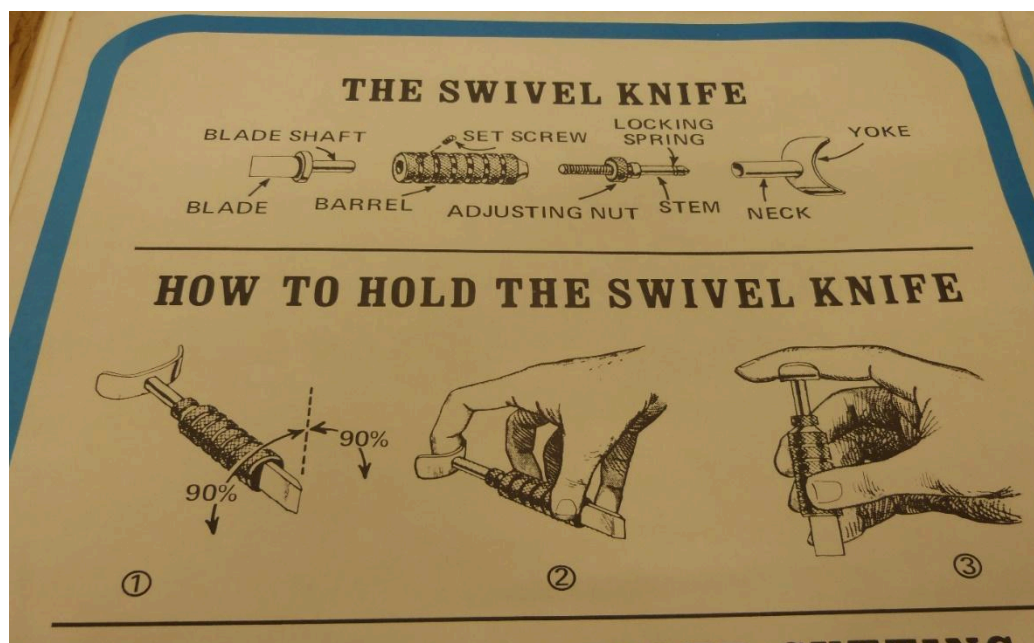
When using the Swivel Knife, it is important to strop the blade every time you pick it up. You will find a small board with a white substance on it. That is called

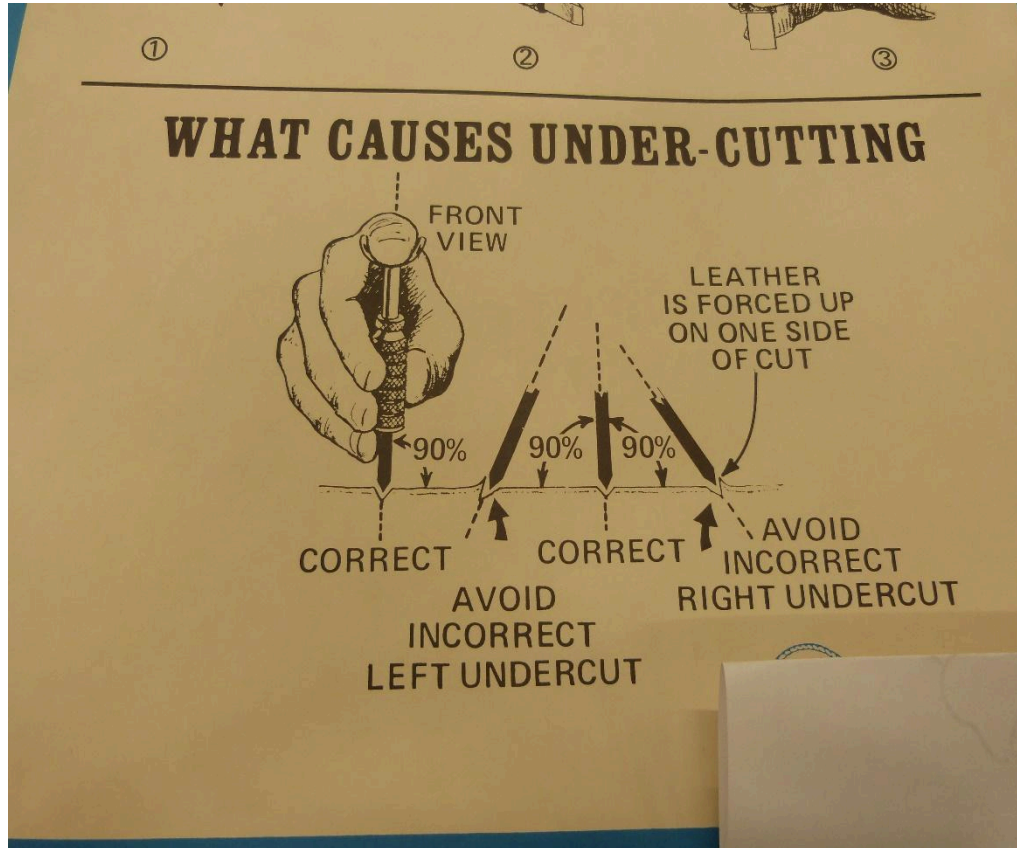
Rouge. It will polish the blade and remove any small particles that cause the blade to not cut well.

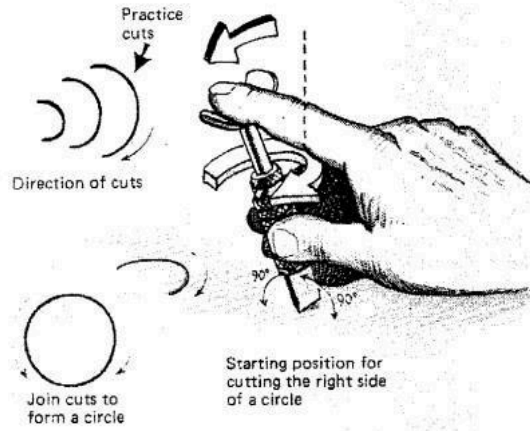
Look at the blade it has an angle. It is important that you stop the blade with the correct angle. A couple of times in each direction will do.

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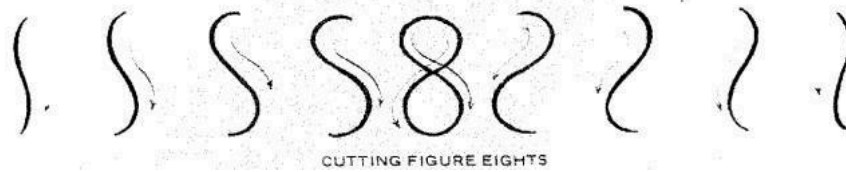
Hold the barrel of the Swivel Knife with your thumb and middle finger. Your first finger goes in the yoke at the top. You control the Swivel Knife by the barrel and you put down pressure by pressing with your first finger in the yoke. Always cut by pulling the knife towards you, keeping constant pressure. There are 2 basic cuts with the Swivel Knife, a straight line and a "C". 2-"Cs" make an S or a Zero depending on how they are used. So, practice on some scrap leather first with a straight line. Pushing firmly into the leather and as you drag the knife towards you lighten the pressure all the way to the end of the cut. This is called feathering, deep when you start and very light when you end. Now practice making "Cs", "Ss" and Zero's. When doing this you want constant pressure. You will have to move to make the Zero. Making $\frac{1}{2}$ with one stroke, stop, then lift the knife and reposition the knife and make the second cut.

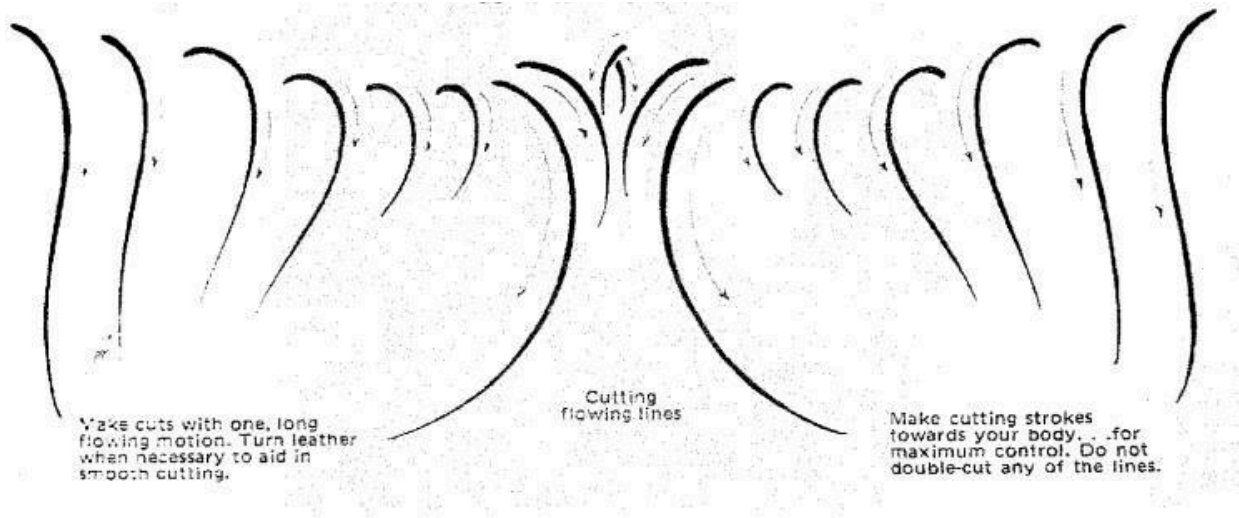






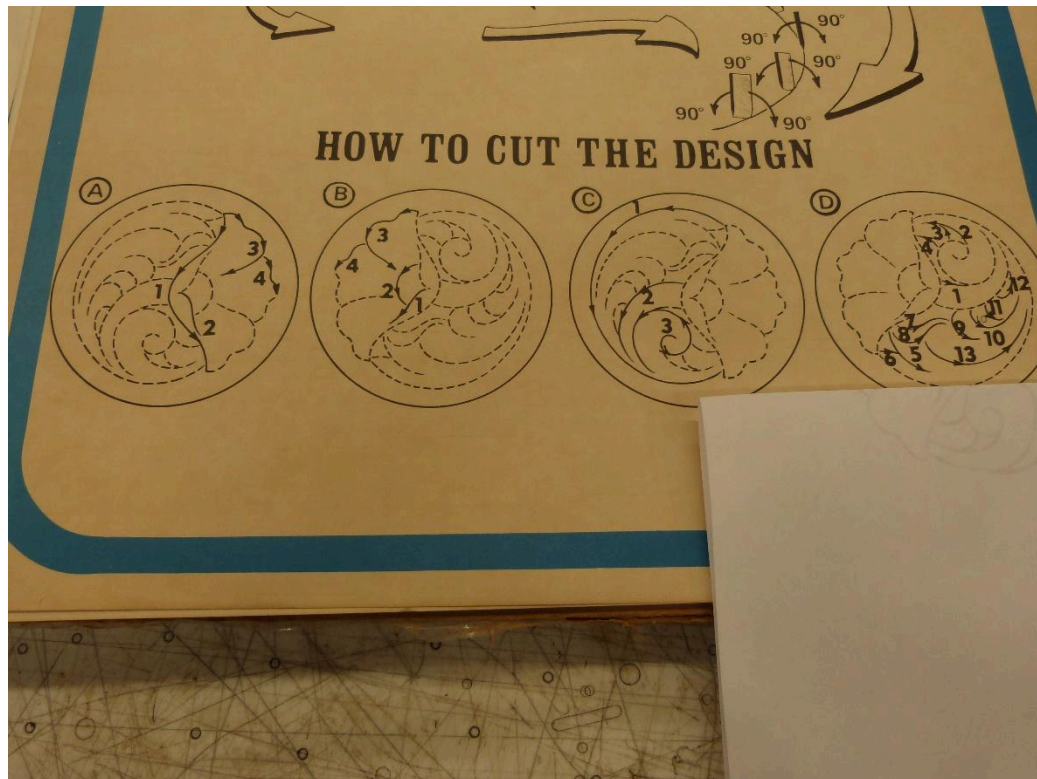
PRACTICE EXERCISES





The above sample is from "Leatherwork Manual" by Al Stohlman, et al. This book, sold by Tandy Leather, should be a part of every leatherworker's library for it's insightful content on the fundamentals of leatherworking.

How to cut the design:



How the leather looks with lines traced on.



How leather looks with lines cut.



Camouflage tool:

Used to hide or camouflage a line. Usually used by tilting the tool one way or the other. Using only a partial impression.





Pear Shader: Used to create impressions to create a 3-dimensional effect



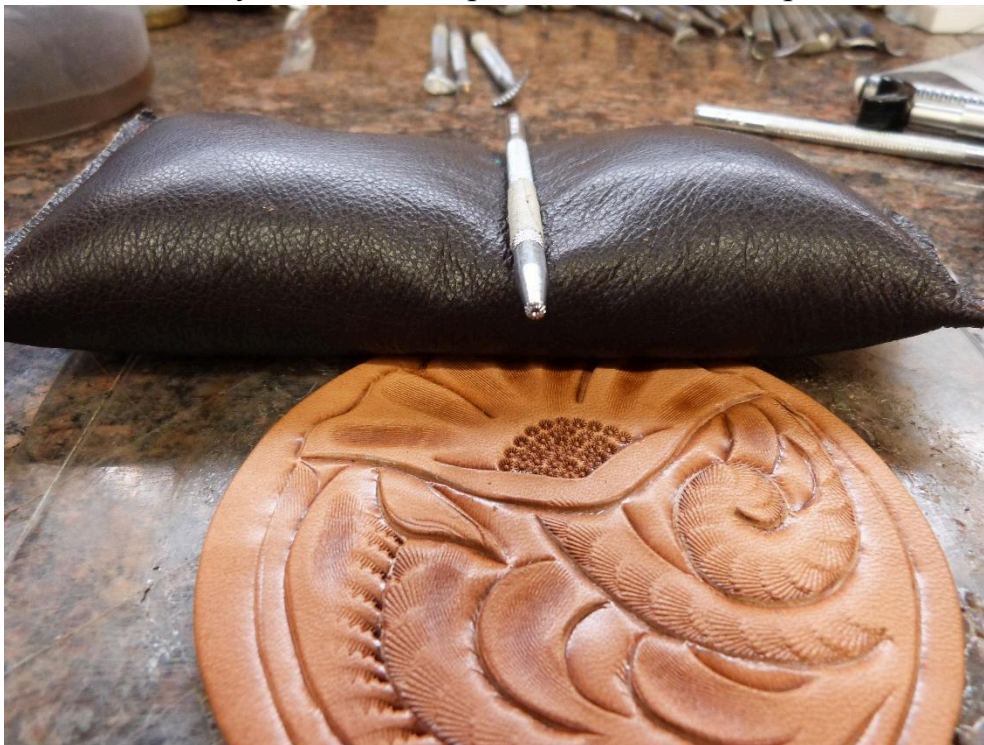
Beveler: Used to bevel lines to divide different areas also to give a 3-D effect



Veiner: Use by tilting the tool one side or the other to give a partial impression.



Seeder: as the name says, it is used to put seeds in the seed pods of flowers.



Background tool: Used to add texture to the background areas where there is no tooling. A space in the pattern where there is nothing but blue sky or darkness.



Swivel Knife decorative cuts. See the diagram with the swivel knife listed above.



You now have finished your first coaster.

Week two:

We will be working on different types of finishing and dying. We will also work on making smooth edges on the coasters.

Week three:

We will work on a small kit from Tandy that will teach you how to assemble a kit and the basics of hand stitching or sewing.

Week four:

We will be making a belt out of a side of leather. I will demonstrate how to cut belt strips out of a side of leather, how to measure for a belt and attach a buckle. Also, we will have a demo on how to use alphabet sets as well as other 3-D stamps. Be sure to bring a buckle to class.

Suggested tool list:

If leathercraft is something you want to continue with, you will need to buy some tools. When starting out, I tell my students to buy what you can afford, then later you can start replacing them as you go with better or more expensive ones.

- A stamping surface, most granite counter top companies will let you pick up scrap pieces for free. Lots of times you can find sink cut outs that are the perfect size for a hobby.
- A swivel knife, I tell my students that if you are going to spend a little extra money on a tool, a good swivel knife would be the place to start. A good swivel knife will help you with that foundation of all your tooling. I would also suggest a ceramic blade too. Tandy has some good entry level choices.
- A good strop and jewelers rouge for your Swivel Knife.
- A mallet or maul. You will need one of these to do your tooling so get one you are comfortable with. Tandy has several good ones to choose from.
- Stamping tools, you can find some good buys on eBay sometimes but unless you know what you are buying you could be spending money on a tool you may not use. Facebook also have several groups dedicated to just buying and selling leather tools and equipment. Look at those too.
- Steel Square
- Wing Dividers or compasses
- Good rulers in 12" and 24" in length to start out with.
- Something to cut leather with, I suggest starting with a utility knife then look at moving up to a round knife.

- Modeling tools
- Hole punches for lacing and stitching.
- Rivet setters and rivets.
- Steel base like and anvil or plate steel.
- tools for stitching,
- Awl
- Needles for sewing and lacing
- waxed tread
- Stitch groover
- Block of bee's wax
- Dyes and finishes, there are a lot of different kinds out on the market. The water-based dyes don't seem to work as well as some of the spirit based dyes. Fiebing's makes a good line of dyes and acrylic finishes.
- Glue and or cement. There as many kinds as there is tools. Pick one that works for you. You will need a strong bonding type of cement for some projects. And of course, rubber cement for tooling.

Resources, you will need a good library of resource material to refer to. There are a lot of books you can buy that you will use from time to time. Here are just a few:

- How to Carve Leather, Stohlman
- The Art of Hand Sewing Leather, Stohlman
- Making Leather Cases, a 3-volume set by Stohlman
- Craftool Tech-Tips, Tandy
- Projects and Designs, Stohlman
- Leathercraft Tools and how to use then, Stohlman
- Braiding and Lacing for Fun, Tandy
- Lacing and stitching for Leathercraft, Tandy

Where to buy your leather and supplies. All of these have websites:

- Tandy Leather Company. Great place for the beginner.
- Springfield Leather Company, Springfield, Mo They have just about everything including Hermann Oak Leather.
- Makers Leather Supply in Texas
- Traditions Leather Supply in Oklahoma City
- Montana Leather Supply

- Hide House Leather Supply, California Large warehouse type place.
- Ohio Travel Bag, good place for specialty hardware and hard to find items.

