



## Leatherwork Merit Badge Guide

Requirements  
2021 02 09

1. Do the following:
  - a. Explain to your counselor the hazards you are most likely to encounter while using leatherwork tools and materials, and what you should do to anticipate, help prevent, mitigate, or lessen these hazards.
  - b. Show that you know first aid for injuries or illnesses that could occur while working with leather, including minor cuts and scratches, puncture wounds, ingested poisoning, and reactions from exposure to chemicals such as dyes, cements, and finishes used in leatherworking.
2. Explain to your counselor
  - a. Where leather comes from
  - b. What kinds of hides are used to make leather
  - c. What are five types of leather
  - d. What are the best uses for each type of leather
3. Make one or more articles of leather that use at least five of the following steps:
  - a. Pattern layout and transfer
  - b. Cutting leather
  - c. Punching holes
  - d. Carving or stamping surface designs
  - e. Applying dye or stain and finish to the project
  - f. Assembly by lacing or stitching
  - g. Setting snaps and rivets
  - h. Dressing edges
4. Braid or plait an article out of leather, vinyl lace, or paracord.
5. Do ONE of the following:
  - a. Learn about the commercial tanning process. Report about it to your merit badge counselor.
  - b. Tan the skin of a small animal. Describe the safety precautions you will take and the tanning method that you used.

- c. Recondition or show that you can take proper care of your shoes, a baseball glove, a saddle, furniture, or other articles of leather. Discuss with your counselor the advantages or disadvantages of leather vs. synthetic materials.
- d. Visit a leather-related business. This could be a leathercraft supply company, a tannery, a leather goods or shoe factory, or a saddle shop. Report on your visit to your counselor.



## Leatherwork Merit Badge Guide

### Homework for All Merit Badges before class:

1. Scouts must read the BSA merit badge book or pamphlet **before** class. A Scout might borrow a copy from their troop library or from another Scout. The latest editions are stocked and are for sale at the Mecklenburg County Council Scout Shop at 1410 East 7th Street Charlotte, NC 28204 704 333 5471

[www.mccscouting.org](http://www.mccscouting.org)

Scouts may order printed or digital copies from [www.scoutshop.org](http://www.scoutshop.org).

2. Scouts can print current merit badge requirements from

<http://www.scouting.org/meritbadges.aspx>

Unofficial merit badge workbooks with all requirements and spaces to write in answers are posted at <http://usscouts.org/meritbadges.asp>

Printing a workbook is optional and not mandatory, but Scouts will find that a workbook from the <http://usscouts.org/meritbadges.asp> will be very helpful in organizing their work and in sending in merit badge homework assignments to their merit badge counselors.

Workbooks printed from <http://usscouts.org/meritbadges.asp>

may contain extra resources Scouts may use to complete merit badge requirements.

Scouts should bring these pages and blank paper and pen to the course to present their notes and research and to facilitate discussions with the counselor and other Scouts during class. Paper and pens will not be supplied by the course instructors.

3. Each Scout should show their pre-course homework to the counselor during their class sessions. If a Scout is not prepared, they may not be able to complete all merit badge requirements before the end of their merit badge class. The Scout can work with their merit badge counselor, or with a home troop counselor identified by their Patrol Leader or Senior Patrol Leader and approved by their Scoutmaster, after merit badge class to complete their blue card. Scouts may also work with their home troop Advancement Chair or Scoutmaster to identify merit badge counselors through Scoutbook.

### **Homework for Leatherwork Merit Badge before class:**

**Requirement # 1.** Please read the BSA merit badge pamphlet and make notes so that you will Be Prepared to review these topics in class.

**Requirement # 2.** Explain to your counselor

- a. Where leather comes from
- b. What kinds of hides are used to make leather
- c. What are five types of leather
- d. What are the best uses for each type of leather

Please consider watching at least one of these videos before class:

Types of leather and their uses 28:17

<https://www.youtube.com/watch?v=cwEOFIST4To>

Leather Types - Leather 101 with Ralph Ricciardi 6:04

<https://www.youtube.com/watch?v=obTDKeNzpUE>

## Sources of Leather

Domestic animals	Hide Sizes	Characteristics	Uses
Asian water buffalo	hides up to 40 sq ft	coarse grain	shoes, boots, small leather goods
Cowhide	sides of 18 to 24 sq ft, up to 16 oz thick	common, versatile, durable	footwear, furniture, car upholstery, saddles, tack, handbags, belts
Calfskin	hides up to 18 sq ft	tight grain, fine texture	shoes, boots, fine leather goods
Pigskin	hides of 10 to 20 sq ft	coarse grain, embossed to hide grain	shoe linings, small leather goods, garments
Sheepskin		lightweight, soft, tanned with wool on as shearling	coats, seat covers, saddle lining
Goatskin	small, thin whole hides	tough, durable, finished in bright colors	women's shoes, tops of cowboy boots
Wild animals			
Deerskin	whole hides of 7 to 12 sq ft	soft, stretchable, lightweight	gloves, moccasins, garments
Kangaroo	whole hides of 5 to 7 sq ft	thin, lightweight, durable, strong	soccer shoes, sports gloves, strips for lacing and braiding
Reptiles: alligator, crocodile, lizard, snake	whole hides or pieces	variety of grains and textures	fancy leather goods, boots, shoes, belts, wallets, handbags

BSA Leatherwork Merit Badge pamphlet

<https://leathercircle.com/blogs/leather-work-tips/animal-sources-of-leather>

<https://www.blackstallion.com/resource-hub/leather-fr-fabrics/types-of-animal-leather.html>

<https://facts.net/types-of-leather/>

## Types of Split Leather

Split name	Type of split	Grain and texture
Full grain	the surface of the hide just below the hair	very tight grain pattern, strongest, most durable, resists moisture, most expensive
Top grain	top 2 mm sanded and buffed to remove imperfections	uniform finish, 2nd strongest, less durable, less expensive
Split leather	Thick cow leather 5 to 10 mm thick can be split.	
Grain split aka top-grain split	Top layer is grain split aka top-grain split.	grain on top, rough on bottom
Flesh split aka drop split	Bottom layer is flesh split aka drop split.	rough on both sides
Suede	split leather with velour surface on both sides; reverse or flesh side of smooth leather	
Velour	rough natural leather	

<https://www.ctlleather.com/hide-types-sizes/>

[https://www.leather-dictionary.com/index.php/Leather grain - Grain side](https://www.leather-dictionary.com/index.php/Leather_grain_-_Grain_side)

[https://www.leather-dictionary.com/index.php/Split leather#What is split leather.3F](https://www.leather-dictionary.com/index.php/Split_leather#What_is_split_leather.3F)

<https://www.leather-dictionary.com/index.php/Suede#Suede>

<https://en.wikipedia.org/wiki/Velour>

<https://www.libertyleathergoods.com/leather-types/>

Types of leather

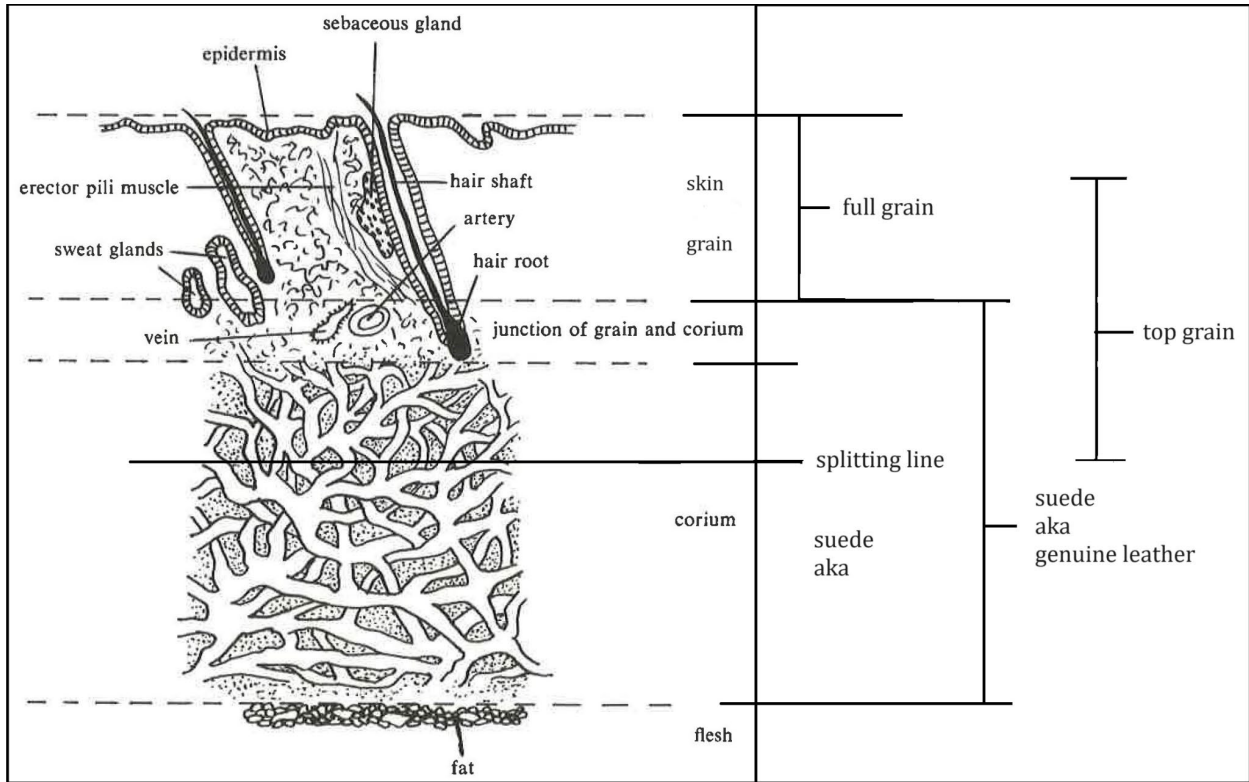
Bridle, Harness, Latigo definitions

<https://www.weaverleathersupply.com/learn/leather-101/leather-terminology>

<https://www.libertyleathergoods.com/leather-types/>

<https://waterhouseleather.com/leather-buying-guide/>

## Leather Layers



<https://www.conservation-wiki.com/wiki/File:Leather-RobertsEtherington.jpg>

Image is in the public domain.

## Types of Leather Tanning

	Vegetable tanned	Chrome tanned
Process	Traditional	Industrial
Chemicals	Tanned with tree bark extracts containing tannins, a family of chemicals including tannic acid	Tanned with chemicals with chromium salts
Duration	Process can take 2 months.	Process can be completed in 1 day by modern machinery.
Appearance	Natural fibers are visible.	Natural fibers are not visible.
Color	Usual color range is limited, often tan to shades of brown and black. More readily develops patina with wear. Subtle shading differences add character.	Can be dyed. Colors are stable. Does not develop a patina.
Smell	Characteristic sweet, woody fragrance	Chemical smell
Advantages	This leather is stiff and firm when new but becomes more supple with time. It is breathable.	Chrome leather is relatively inexpensive, widely available, water, heat, and stain resistant, and soft and flexible from the time of purchase.
Disadvantages	Expensive and uncommon because of slow, manual processes. Uses large amounts of water (not toxic).	Wastewater is toxic and can harm soil and groundwater supplies.
Wear	This leather wears well and lasts a long time.	It does not wear well and can lose its new appearance over time.
Tooling	This is the only leather that can be tooled.	This leather cannot be tooled, that is, stamped or patterned.
Uses	Belts, holsters, shoes, saddles, wallets, bags, and purses	Jackets, bags, gloves, furniture, and car upholstery
Care	Avoid water exposure in the first month while leather softens with use. Use all-purpose leather cleaner and conditioner. Avoid heat and drying with heat. Use animal hair brushes, not synthetic bristles.	Use wax or waterproofing spray, not oils. Avoid storing in sunlight or in moist places.

<https://bestleather.org/types-of-leather/vegetable-tanned/>

<https://bestleather.org/types-of-leather/chrome>

<https://dh.wcu.edu/index.php/2010/08/30/tanning/>

## Thickness and Uses of Leather

Weight per Square Foot	Thickness	Common Uses <a href="https://www.libertyleathergoods.com/leather-thickness-weight/">https://www.libertyleathergoods.com/leather-thickness-weight/</a>
1 – 2 oz	1/64" to 1/32"	Thinner shoes, boots, wallets, watch bands, molding, thin purses, linings, bookmarks, small pouches
2 – 3 oz	1/32" to 3/64"	Shoes, boots, wallets, thicker watch bands, molding, thin purses, linings, bookmarks, small pouches, embossing, light upholstery for chairs, couches, and other seating
3 – 4 oz	3/64" to 1/16"	Shoes, boots, thicker wallets, molding, smaller handbags and purses, pouches, embossing, standard upholstery for chairs, couches, and other seating, thin notebook covers
4 – 5 oz	1/16" to 5/64"	Shoes, boots, smaller handbags and purses, pouches, smaller knife sheaths, keychains, wrestling masks, light chaps, light aprons, notebook covers
5 – 6 oz	5/64" to 3/32"	Shoes, boots, smaller handbags and purses, thicker pouches, smaller knife sheaths, keychains, thicker wrestling masks, chaps, light aprons, notebook covers
6 – 7 oz	3/32" to 7/64"	Thin armor, shoes, heavier boots, larger notebook covers, knife sheaths, thin sword and bayonet scabbards, keychains, thicker pouches, handbags and purses, bags and duffels and carrying cases, heavier chaps, aprons, thin belts
7 – 8 oz	7/64" to 1/8"	Thin armor, thicker shoes, heavier boots, large notebook covers, knife sheaths, sword and bayonet scabbards, typical handbags and purses, bags and duffels and carrying cases, thick aprons, light pet collars, belts, light straps
8 – 9 oz	1/8" to 9/64"	Armor, heavier notebook covers, knife sheaths, sword and bayonet scabbards, keychains, typical handbags and purses, bags and duffels and carrying cases, pet collars, slings, belts, straps, holsters, saddle bags
9 – 10 oz	9/64" to 5/32"	Armor, knife sheaths, sword and bayonet scabbards, keychains, larger handbags and purses, bags and duffels and carrying cases, pet collars, slings, straps, heavier belts, holsters, saddle bags
10 – 11 oz	5/32" to 11/64"	Thicker armor, heavy knife sheaths, keychains, larger handbags and purses, thicker bags and duffels and carrying cases, pet collars, slings, straps, heavier belts, holsters, saddle bags, light saddles
11 – 12 oz	11/64" to 3/16"	Thicker armor, heavy knife sheaths, heavy handbags and purses, bags and duffels and carrying cases, keychains, pet collars, slings, straps, belts, holsters, thick saddle bags, light saddles
12 – 13 oz	3/16" to 13/64"	Thicker armor, slings, keychains, pet collars, straps, belts, heavy handbags and purses and cases, holsters, typical saddles
13 – 14 oz	13/64" to 7/32"	Heavy armor, light shoe soles and heels, light machine belting, thick belts and straps, tack, typical saddles
14 – 15 oz	7/32" to 15/64"	Heavy armor, shoe soles and heels, machine belting, thick belts and straps, heavy tack
15 oz +	15/64" +	Heavy armor, shoe soles and heels, thick belts and straps



Scouts will accomplish **requirements # 3 and # 4** in class.

Requirement # 3. Make one or more articles of leather that use at least five of the following steps:

- a. Pattern layout and transfer
- b. Cutting leather
- c. Punching holes
- d. Carving or stamping surface designs
- e. Applying dye or stain and finish to the project
- f. Assembly by lacing or stitching
- g. Setting snaps and rivets
- h. Dressing edges

Please read about the technique of saddle stitching before class:

<https://traditionalblackpowderhunting.com/how-to/hand-sewing-an-introduction/hand-sewing-basic-stitches/>

This link shows information on lacing and stitching leather:

<https://www.libertyleathergoods.com/how-to-lace-leather/>

Information about hand sewing being much faster than lacing and other merit badge class efficiencies:

<https://www.scouter.com/topic/31512-leatherwork-merit-badge/>

This wallet kit has an interesting design:

<https://www.etsy.com/listing/1084518118/diy-leather-wallet-kit-diy-kit-leather>

**Requirement # 5.** Do ONE of the following:

- a. Learn about the commercial tanning process. Report about it to your merit badge counselor.
- b. Tan the skin of a small animal. Describe the safety precautions you will take and the tanning method that you used.
- c. Recondition or show that you can take proper care of your shoes, a baseball glove, a saddle, furniture, or other articles of leather. Discuss with your counselor the advantages or disadvantages of leather vs. synthetic materials.
- d. Visit a leather-related business. This could be a leathercraft supply company, a tannery, a leather goods or shoe factory, or a saddle shop. Report on your visit to your counselor.

Please watch one or more videos about tanning and about a leather-related business.

The Tanning and Finishing Process of Leather  
Industrial leather tanning in Italy

[https://www.youtube.com/watch?v=DyN\\_xX8NEIk](https://www.youtube.com/watch?v=DyN_xX8NEIk)

Herman Oak Leather tannery

<https://www.youtube.com/watch?v=9OYcmbOLnuY>

Leather Shop, Asheville, NC

<https://www.youtube.com/watch?v=6rXlh-t3HQ>

Meet a leather craftsman, Mr. Carl Miller, at his shop in Concord, NC 24:44

<https://handbuiltleather.com/>

<https://youtu.be/5cN7Tgc2vyw>

ColsenKeane Leather

<https://colsenkeane.com/pages/video>

[https://www.youtube.com/watch?v=L8mn9h0Ex\\_k](https://www.youtube.com/watch?v=L8mn9h0Ex_k)

ColsenKeane is a leather goods store on 7th Street in Charlotte, NC, near the Mecklenburg County Council office. Craftsmen work there to produce high-quality leather products that they ship to customers around the world.