

Sammy: This hat...

Heather: These gloves..

Sammy: That shawl...

Heather: and this “attractive” sweater your grandmother made you.

Sammy: They all have one main thing in common.

Heather: Wool.

Sammy: Yes, the wool that comes from the over 4 million sheep in America.

Heather: Wool is an amazing natural, warm renewable, fiber that we will be working with today to show you the entire hand processing of it from sheep to shawl.

Sammy: Join us on the farm tonight as we cover all nine steps of basic hand processing. These steps include: Selection, shearing, skirting, washing, carding, dyeing, spinning, weaving, and the final finishing steps.

Heather: First, we will start with the selection of our fleece. The fleece, and breed of sheep that it comes from, will depend on the project you intend on making. The most common wool and breed classifications are fine wool, medium wool, longwool, and carpet wool. Fine wools and sometime medium wool breeds produce the wool that is used for clothing and dress fabrics. A common example of a fine wool breed is the Merino. On the farm the fine wool breed that we raise are Targhees.

Sammy: Longwool and coarse wool breeds produce more wool that is used for carpet and sweater material. A carpet wool, breed would be something like the Karakul. The other breed of sheep that we raise are Shetland sheep. Now

depending on who you talk to these could be classified as either a carpet breed or a medium breed. Today, we will be demonstrating with a shetland sheep and it's wool.

Heather: Now that we've chosen our breed and fleece, it's time to shear our sheep . We are shearing our own, but you can always hire a professional shearer. To start, have a good pair of shears and blades; you can also use hand shears, like these, but it's **much** quicker and easier to use electric shears and they do a neater job.

Sammy: For demonstration purposes we will only be shearing half of our sheep with simplified steps. To shear the sheep flip it onto the rump and support it between your knees. Be sure to always Tighten the skin on the belly and other loose spots of skin. Make your first stroke down the stomach and along the side towards the legs. Flip the sheep over so you can shear up the leg and along the backbone. Next, shear up the shoulder to and along the jawline. Then, lay the sheep on it's back. Shear along the side and make your last two blows parallel to the back bone. *(Hand Shears to Heather)*

(Turns sheep around) This half of the sheep shows the complex shearing pattern commonly used by professional shearers. Now we are going to take our fresh fleece straight to the skirting table.

Heather: The next step in hand processing a fleece is skirting. Skirting is the process of removing vegetable matter, dung tags, and other unwanted pieces of fleece such as the britch and neck.

This is a skirting table, they come in a variety of sizes and shapes depending on the need. We lay the fleece out from head to tail and remove everything by hand. The britch, which is located on the hindquarters of the sheep, is undesirable on this fleece, because it is much coarser than the rest of the fleece and full of manure. The neck area on this fleece is also undesirable because it is cotted and full of hay chaff. The rest of the vegetable matter can be easily removed.

Sammy: Washing is step number four in the overall process. Washing removes the grease or lanolin from the fleece. Lanolin may sound familiar because it's used in many types of soaps, cosmetics, and ointments.

The washing process is pretty simple. For this demonstration, we will start with 2, buckets and fill them both with hot water between 140-160 degrees Fahrenheit.

For detergent, we are using dawn dish soap, but any other mild dish soap will work fine. For every pound of fleece being washed $\frac{1}{3}$ cup of soap should be added. Mix your detergent thoroughly and gently. You do not want to create any suds.

Next, we will want to weigh out our fleece. For every 15 gallons of water, you should have 5 pounds of fleece. With 5 gallons buckets, we can wash about 2 pounds or less.

Heather: Now it's time to submerge your fleece. Be very careful not to agitate the fiber! If you agitate it in any way there is the high risk of it felting and becoming unusable. Cover the top of your bucket with the lid to retain the heat. Let the fleece soak for 20 to 30 minutes.

Carefully remove the fleece and place it into a rinse bucket with more hot water. Repeat this washing and rinsing cycle at least 1 more time before removing the extra water.

Sammy: To remove the extra water in the fleece, at home we would put the damp fleece in a mesh dryer bag, and put it in the washing machine on the last spin cycle.

Now that all of the extra water has been removed, and now it's time to lay the fleece out on our drying rack. Now we wait for the fleece to dry, during this time you can "pick" at the wool and fluff it out a bit to make it easier for the extra

vegetable matter to fall out and quicker for it to dry. This will take about 24 hours or more, depending on weather conditions.

Our fleece is now dry and it's time for carding. The purpose for carding is to separate and straighten the wool fibers.

Heather: There are two common ways of carding that can be done at home easily, either with a pair of hand carders or a table-top drum carder. The results are the same including batts, roving, or rolags of lofty wool that make spinning much easier. Drum carding allows you to card larger amounts at one time and blend different fibers easily, but today we will demonstrate carding with the hand carders.

Sammy: First lay staples of wool across the teeth of one carder. Distribute it so the teeth are barely showing through. Take the second one and brush it over top of the fiber to distribute it evenly over one another. Take the "toe" end of your stationery carder, and line it up with the "heel" of the working one. Lift the fibers up to transfer them to the working carder. When the fiber is well separated and airy, scoop it from the paddle and roll it off.

Heather: We're moving onto our sixth step; dyeing. Dyeing your wool is completely optional, but it's still an important depending on your end product.

On the farm, we dye our wool with Jacquard acid dyes. Acid dyes are beneficial because they are easy to use and provide a brightly saturated color. However they can also be toxic, that is why we'll be wearing safety goggles and gloves.

For dyeing, heat two gallons of water per one pound of fiber in a cooker near boil.

Sammy: We add about $\frac{1}{4}$ of a teaspoon of the powder to the water for a bright color and stir until dissolved.

Heather: Submerge the fiber for about 10 minutes when all of the dye has been

absorbed add 1 cup of vinegar to set the dye. Then let it soak for half an hour. When it's time for the fiber to be removed it should be rinsed in warm water.

Sammy: Now that you have your roving or rolag colored to perfection, it's time to start spinning it into yarn. Spinning is the process of working wool on a drop spindle or spinning wheel so it will tighten and spin into yarn.

This is a two treadle spinning wheel, one treadle spinning wheels are also common today. To set up the spinning wheel with a lead piece of already spun yarn. Your non-dominant hand should be closest to the wheel and the dominant hand closer to you. Overlap un-spun and spun fiber, holding it with your non-dominant hand and start to turn your wheel clockwise by peddling the treadles slowly like a bicycle. This will cause the fiber to twist. Draw out the fiber towards you and slowly add more wool as you draw it back towards the bobbin.

Heather: Eventually your bobbin will become full and you can removed the yarn. You now have the option to ply your yarn. Plying is when you spin with yarn in a counterclockwise direction making it thicker and stronger. After you are done spinning or plying your yarn you can wrap it into a ball on a yarn winder or into a skein using the skein winder. Finally set the twists by soaking them in hot water.

Sammy: Finally we are ready to make our shawl. For demonstration purposes we are using a smaller size loom. The one used to make our finished shawl is an 8ft 90 degree triangle. We use a method called continuous strand weaving, it is nice, because you can easily pick up from where you last left and change colors often.

This loom we have here has already been started. To do the actually weaving take your yarn and "weave" it over and under the strands and pull your yarn from the top through. Warp another horizontal row and weave it through again to continue the pattern. When your shawl is completely finished you can carefully pull it off of the nails.

Heather: Now we are to the final step, Finishing. For our finished shawl, we will felt it in a washing machine This will set the weave, just like setting the twist in your yarn after spinning. Felting will also shrink the shawl and make it fluffy as seen on the shawl here.

Sammy: We have finally completed our shawl and all of the intense steps it took to make it. So the next time you're putting on your wool gloves and hat.... or even grandma's sweater, remember how much work and dedication it takes to make something so special out of one of the worlds strongest, natural, and renewable fiber

Sammy: from sheep...

Heather: to shawl.