Cocktails and Camelids

instructor
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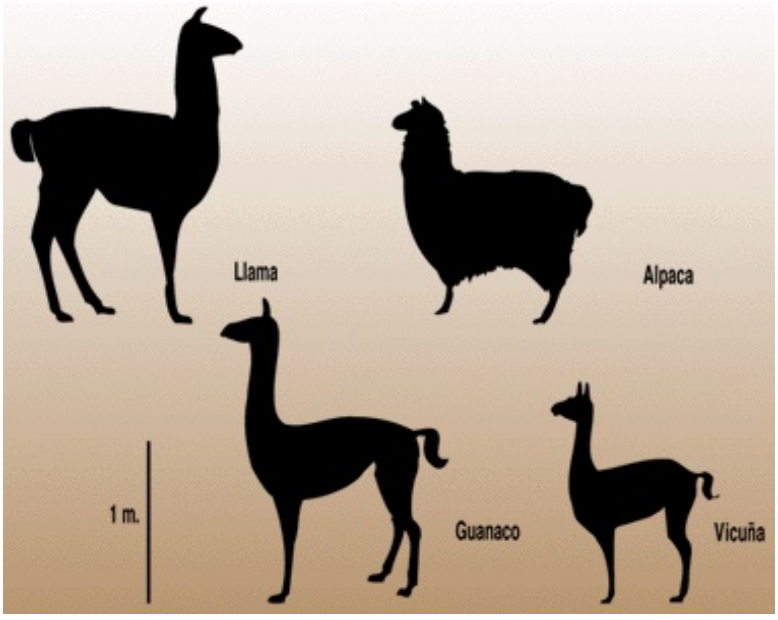
Camelids Native to South America



Alpaca

Llama

Guanaco

Vicuna

SPINNING

The beginning of spinning in the Americas is like its beginning everywhere else in the world - lost in the beginnings of man. Some of the twisted fibers found in caves of the Andes are 10,000 years old.

In the Inca empire, there were large convents where young women were housed and where they were trained to be “Virgins of the Sun”. Spinning was one of the things they were taught.

Details of how and who did the spinning is not detailed, as I have found over and over wherever I do research. But there had to be a lot of people spinning to make the fabric needed by all the peoples over the thousands of years.

Virgins of the Sun

Young woman spinning*

The handspindle is a simple machine, it has no moving parts, with the exception of a few spindles which are made to break down for storage. It has a whorl, a round weight that allows the spindle to maintain a spin, and a shaft which goes through the center of the whorl. Some of the spindles are meant to be used while suspended, thus the name 'drop spindle', some are meant to be used while being supported on the leg, in a bowl, or on the ground, and some were held in one hand. Historically, handspindles, or drop spindles, were made of different materials depending on what was available around those who used them.

Handspindles are versatile pieces of equipment, the same one that spins a good woollen thread can also spin cotton. By choosing your first spindle with care, it will be

possible to use it over and over with different fibers. Like any other machine it is possible to buy one that only has one 'best' use. The weight of the spindle will affect the size of the yarn that you can produce. If the spindle is heavy, then your yarn must be thicker and strong enough to support the weight of the spindle and the weight of the yarn as you store it on the shaft. If the spindle is too light it will not spin well with the heavier yarns. The best weight is between 1½ ounces and 3 ounces. I use a smaller type that is great for the superfine thread, that is made of wood, and weighs just 1 ounce.

The whorl can be any shape, some are clay balls, some are flat circles; where they are placed on the shaft can change the efficiency of the spindle. The shaft needs to be long enough to allow the yarn to be wound around it and balance the size of the whorl. I have found that if the whorl's diameter is about one-fourth the length of the shaft, the spindle works well. Spindles with too long a shaft tend to wobble, and if the shaft is too short it will not spin as long. The spindles with balls instead of a flat whorl were normally used as supported spindles, but if made with a shorter shaft may spin enough to be used suspended. As the whorl gets smaller, the shaft diameter will need to be smaller also, so that the weight remains in the whorl, not the shaft.

(*This drawing and the others like it in the handout come from treatise on the Inca Empire. Written around 1615 by Felipe Guamán Poma, it had 1,179 pages and a wealth of drawings. It was lost for a long time and rediscovered in 1908.)

MAKING A DROP SPINDLE
HIGH WHORL STYLE

Materials:

-5/16" dowels, 12" long

-small eye hooks, opened to form hooks

-wood appliques

-wood glue, sand paper, needle nose pliers, drill for making the center hole and the start hole for hook

-optional: paint to decorate

Suppliers:

Michael's Craft Stores (Hobby Lobby or JoAnn's may have similar products in their wood section)

Ace Hardware, Home Depot, Lowe's online: www.dlawlesshardware.com

Some of the parts needed for the spindles.

Directions:

Sand all wooden parts, and using a drill press or hand-held drill make a 5/16" hole in the center of the wood appliques. I use the center of the flower to mark the center, and that makes it easier than using a plain circle cut out. (Besides, the spindles are pretty even if not painted, then) I have bought other sizes of wooden appliques - even square ones - and used smaller and shorter dowels that I have cut down a little. It can become a physics lesson in that weight and diameter of the whorl, the size and length of the dowels, and the position of the whorl on the dowel can all affect the spinning ability (they all will work to a point, but finding the optimum spindle can be very exciting ---- ok, to me....).

Using a small screw driver and pair of needle nose pliers, you can open the eye hook into a open hook. (I have not found small enough hooks already opened for most of the spindles I make). Drill a starter hole for the hook with a very small drill bit, or you can use a small nail or awl and make an indentation to make screwing the hook in easier. Screw the hook in either before you put the whorl on or after, I find it easier to do it after, but it doesn't matter which.

Slide the wood applique (whorl) onto the dowel, and work to about 2 inches from the top. This is a personal preference, I just think it spins better, but you may talk with people who put it in different positions. Apply some glue if needed - I like to go ahead and put the glue from the beginning, I hate having the spindle start slipping while I am using it. If you want to, you can taper the end of the spindle so that it narrows at the bottom, but other than the sanding, it is not absolutely required.

Paint if you want to. The spindle is ready to use.

Spindles made from wheels and different wood appliques. The sizes of the shafts vary to accommodate the size and weight of the whorls.

SPINNING ON A DROP SPINDLE

There are several types of handspindles so there are just as many ways to get started. If you have a low whorl spindle with a notch, you can tie a leader onto the bottom of the shaft, wind it up the shaft, and connect to the notch with a half-hitch. You can create your own leader by hand twisting some of the fibers you will be spinning. Roll them on your thigh to tighten the twist, fold the thread in half, fold back the loop end on the doubled thread, opening the loop. Pick up the doubled thread under the loop and pass the spindle tip through this slip-loop and pull tight. If you are using a high whorl spindle simply catch a bit of the fiber in the metal hook and twist in a clockwise direction to begin the spinning. You are ready to start spinning.

Decide whether you want to hold the unspun fiber in your right or left hand, and spin the spindle with the opposite hand. See which is more comfortable for you. Hold the end of the thread (and the unspun fiber should drape over the top of your hand and be held away from the spinning thread so it will not tangle). Suspend the drop spindle free putting tension on the thread. You will be able to spin a fairly fine thread with practice, but it must be strong enough to support the weight of the spindle. Reach with your free hand and hold the bottom of the spindle, give it a clockwise turn to start it spinning.

For beginners: After you give the spindle a good strong twist, and it has spun for several seconds, stop it and place it between your knees to keep it from going in the opposite direction. Still holding tension on the thread use both hands to pull out the unspun fibers and watch the twist move up to form thread. In the drafting, always pull your top hand up to maintain the tension on the newly spun thread. When the twisting stops moving up the thread, pinch it off and give the spindle another good twist. Repeat this until you are within about 1½ inches from the end of your prepared fiber.

When you are more experienced: When you can spin a uniform thread using the method above, feel free to try the traditional drop spinning with the spindle suspended while turning. Give the spindle a good firm turn and use both hands to draft out the fibers so that the twist moves up the fibers forming thread. When the spindle is suspended, you will note that it is possible to draft by pulling the thread down instead of pulling the fiber up, but it is still a good idea to pull the fiber up; it is a motion that will come once you start on the wheel. To keep the drafting triangle at eye level, lower your arms as you draft and wind the yarn when the spindle reaches the ground.

When you are ready to join on another piece of roving, allow the unspun fibers from the thread to lie on top of the new roving and draw out the two sections together for a smooth join. Once the drop spindle reaches the floor or you cannot keep it spinning, hold

the thread under tension and take the spindle in your free hand. Unhook the thread from the notch or hook, and wind, clockwise, onto the shaft of the spindle evenly from the end closest to the whorl out. You will form a cone shape in your windings. You then hook the thread back on the notch or hook, leaving several inches of thread above the notch and continue spinning.

PLYING ON A DROP SPINDLE

The decision to ply or not to ply is becoming less distinct. Singles are now being used in all mediums - weaving, crochet, knitting. Spinners are using both singles and plied yarns dependent on the yarn's own merits and not because someone else has said it should be so.

Plying is the twisting of two or more singles together to make one yarn. A slightly overtwisted yarn can be plied to correct the overtwist and create a balanced thread. When you hold a balanced yarn, it hangs loosely without twisting back on itself. Plying is also done to make a thicker yarn, often from a fiber that could not spin thick singles as well. Plying two different colors, fibers, or sizes of yarn can create completely new yarns from ordinary singles.

After you have spun at least two spindles of yarn, you can ply them. You simply make two balls of yarn from each spindle, put each ball in its own mason jar, box, or basket, and you are ready to ply. Placing the yarn in something keeps them from rolling around on the floor and getting tangled with each other. You can use a ball winder which will allow you to pull the center tail and the outer tail to ply from both ends of a single ball of yarn.

If you are using the high whorl spindle, you can slide the yarn off the end, and put it on a knitting needle. Using a shoe box with holes in the sides, you can put the knitting needles in the holes and let them turn freely to unwind the yarn. The needles should turn freely in the holes.

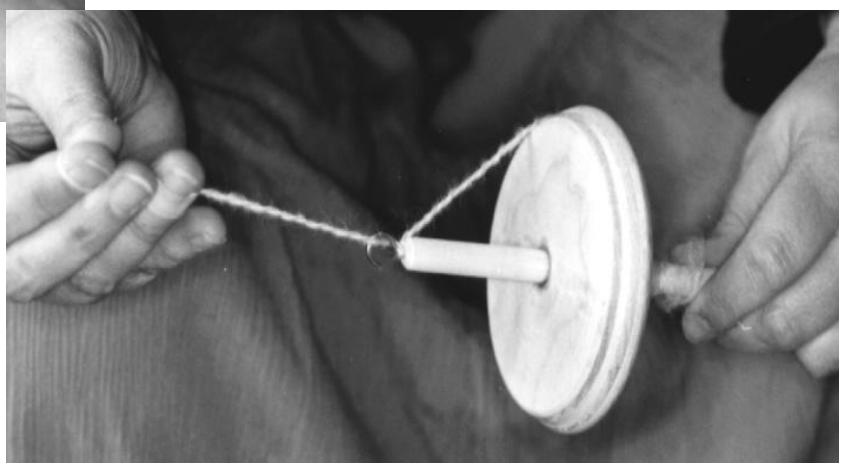
Tie the 2 free ends of yarn together and loop onto the hook or notch of the spindle (or tie to a leader). Let the yarns feed through any two of your fingers on one hand to hold constant tension on the threads. You will be holding both threads together with the forefinger and thumb of the same hand.

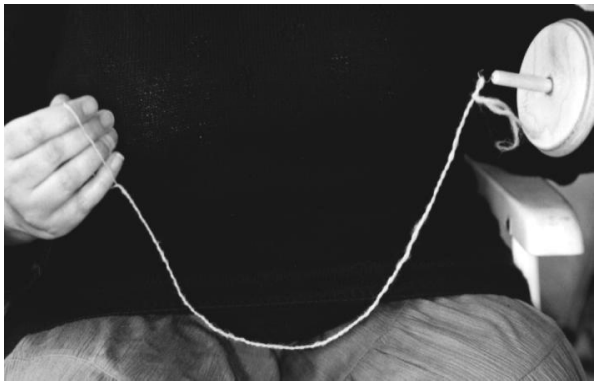
Slide your fingers along the yarns for about ½ yard while inducing them to unwind from the storage set up. Spin the spindle counterclockwise (opposite from

the direction you spun the singles) until the yarn seems nicely twisted.

If the yarn is newly spun, you can pick up the spindle in the other hand (do not release the hand that is holding the separate ends) and see if the plied yarn will form a nice curve from the spindle to your hand. That is a characteristic of a balanced yarn. You can use a purely visual check to make the yarn the way you want it, and give the spindle a another spin until the plied yarn looks the way you want.

Wind onto the spindle in the opposite direction from the way you spun the singles to store the yarn. Half-hitch, or hook as before and repeat the above sequence plying about a yard at a time until all the yarn is plied.

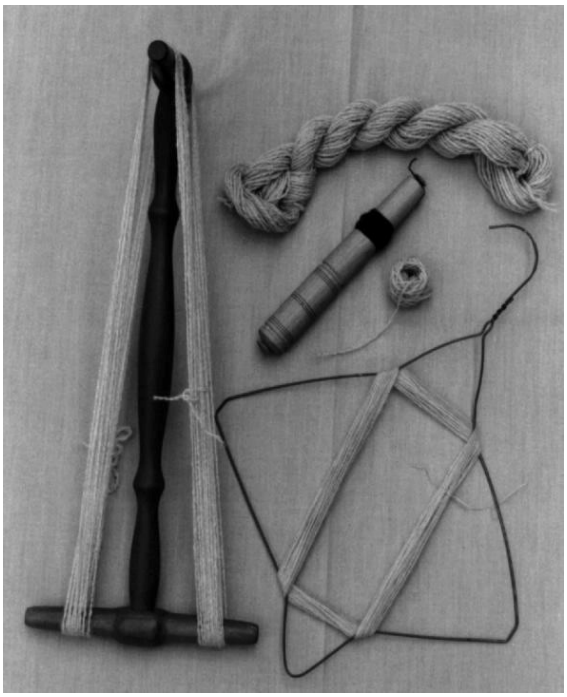




SKEINING THE YARN

When you are ready to remove the yarn from the spindle, you can wind it into a ball or wind the yarn on a niddy noddy to form an open loop of yarn called a skein. If you do not have a niddy noddy, you can wrap the yarn around the back of a chair, around the form of a coat hanger, or simply around someone's two hands held up for the purpose.

There are other ways to store the thread, but the skeined yarn can be easily washed and stored until ready to use. Winding the yarn into a ball is another easy storage method and if the yarn is ready to use, you may want to simply wind the yarn into a ball.



It is possible to use your yarn directly off the spindle whether as singles or plied. Usually the yarn is washed before using to make sure all the grease and dirt is out of the yarn. It is also exciting to watch the way the yarn transforms by being washed. Wash in hot sudsy water, squeeze out excess water after rinsing, and hang or lay to dry.

DYES USED IN ANCIENT SOUTH AMERICA AND DYES WE ARE USING

Blues - Anil - Indigofera suffruticosa

Indigofera tinctoria

Yellows - Cosmos sulphureus

We will be using Osage Orange, Marigolds, Coreopsis or some locally available yellow source

Reds - cochineal - Dactylopius coccus

DYEING

Whether we are talking about the peoples of North, South, or Central America, we can see color in their textiles. This is true of people all around the world. Dyeing is an ancient profession; practiced and perfected in individual homes as well as dyeing centers where dyeing on a large scale was done. Although indigo is considered a worldwide dye and we consider cochineal a New World Dye, it is more the species of insect used for the reds, corals, oranges, and purples that is New World. And, it is the species of indigo used in each locale that gives the people the colors in their textiles.

People have been using **indigo** for thousands of years. Some historians believe that indigo and its relatives are among the oldest dyes known to man. So.... what exactly is indigo? Today is used to describe a color, a plant, as well as a dye - both synthetic and natural. Today most of the processed indigo comes from *Indigofera tinctoria*, but there are more than 700 species from the genus *Indigofera*. The plants are native to places from Asia to South America - one of the new world species is *Indigofera suffruticosa*, which was planted in Georgia during the colonial period and to this day grows wild on the north end of Ossabaw Island, on a site of colonial period plantation. Not all of the *Indigofera* species produce the dye, some are also medicinal.

Cochineal has been used since early times in South America - mummies found wrapped in dyed fabrics date back thousands of years. And the Spanish found the amazing textiles of both the Aztecs and the Incas to have such vibrant color that they exported Cochineal to Europe.

DYE RECIPES - these will be used in class - it can be the beginning

Cochineal: Grind 3 oz (¼ c) cochineal (for every lb of fiber/yarn) and place in a bag. Add bag to the dyepot and cook for 1 hour. Remove bag and enter fiber and cook for an hour. After the first 30 minutes, remove fiber, add mordant and re-enter fiber.

We will us pH up and pH down to adjust the pH and change the color of the dyebath. We will also overdye an indigo sample to create a purple.

Osage Orange sawdust: Yellow dyes are relatively easy to extract. If you do not bag the dye material, you will want to strain it before adding the yarn or fabric. For Osage Orange, we will use 3 oz of sawdust per lb of fiber. Add bag to water and simmer for at least ½ hour. You can let that sit overnight or dye immediately. When using larger amounts of dye material, letting it soak over night after cooking is always a good idea to extract as much color as possible. Enter fiber and cook for about ½ hour. A good strong yellow can then be overdyed with indigo to get a green. Pre-mordanted fiber can be used or you can add the mordant after 15 minutes of cooking; some yellow dyes do not need mordants, and most of them fade to some point.

Indigo - Hydro-Sulfite Bath:

Indigo is not like other natural dyes, it cannot simply be tossed in a pot and simmered. It actually is a complicated chemical process and it amazes me that so many people figured out how to extract the dye and use it so long ago. In this class, we will use this recipe for a Woad pot, but I use this recipe for both indigo and woad quite easily.

There are lots of recipes that you will read about, and maybe you have played with one or two already. Some them have several steps and some of them I can not really follow well, so when I found this one, I discovered that it works under almost any conditions. I use it during historical demonstrations with no thermometers and simple measuring spoons, because it is based on a ratio method. Even though the original recipe with the measurements below said it would dye 4 oz, I find it dyes more. This makes it easier and less frightening. This is my very favorite recipe:

1 part indigo: 2 parts washing soda:4 parts spectralite (I use teaspoons, because that is what I have most of the time – I rarely measure in oz because generally I don't carry a scale with me - and definitely not during my RenFest demonstrations.)
½ oz indigo powder
1 oz washing soda
warm water
2 oz sodium hydro sulfite (spectralite) or thiourea dioxide {do not use all of this at once, I sprinkle it a little at a time over the time of dyeing to make sure the dye stays yellow-green.}

THIS IS AS I WAS TAUGHT: Put indigo powder in a small jar and add ¼ c warm water. Stir to form paste. In a separate jar combine washing soda and 4 oz of water, stir until the washing soda is dissolved. Add 2½ oz of the fluid washing soda to the indigo paste in sauce pan and stir thoroughly. Shake in 1 oz of spectralite and stir, Add 1 quart of warm water and stir gently to make an even bath. Heat the mixture to 130º (do not go over 140º). The liquid will begin to turn a yellowish color. Let the liquid stand for 20 minutes, the color should be a yellow-green. Shake 1 oz of the spectralite over the surface of the dyebath to render harmless any of the dissolved oxygen. (*Big question - what exactly can you dye in 1 quart of water??? Answer: teeny-tiny skeins*)

NOW, THIS IS WHAT I DO: Heat a pot of water - enough so that my yarn, fabric or whatever will have plenty of room to move around. When it is warm, take some of that water in a measuring cup and mix the indigo to dissolve.

Take up another scoop of warm water in cup and dissolve the washing soda in it. Add them both to the dyepot.

Have my spectralite in a jar with a dry spoon close by. Take a teaspoon or 2 and sprinkle it on the surface of the dyepot.

Let it cook for about 20 minutes. A shiny bluish, purply foam will appear on the surface of the dye. We call this the “flower” or the “bloom”. Using a spoon or spatula, scrape it off and save it in a bowl or plastic bag.

Check to see if the dyepot is a yellow-green. If it is too yellow or leaning towards the clear, it may need to be stirred just a little, but most of the time, it is ready after the 20 minutes. I try to keep the water just slightly steaming, but on hot summery days, I have put the dye in crocks and used it without heat for hours. If during the dipping of the fabrics and yarns, the pot starts turning bluish, I sprinkle more spectralite on the surface and let it rest for a few minutes.

THE DYEING: This is an alkaline dyebath and so you should be careful with when dyeing animal fibers. I take the raw wool, roving, yarn or fabric and dip it in the pot. I leave it in for just a few minutes - just long enough to thoroughly soak it through - cottons can be left in longer. I have found it helps if the fibers are pre-wetted, but then well-squeezed before introduced to the bath.

Remove them carefully from the bath, being careful not to add air bubbles back to the dyepot. I have found I can be more rough than I thought though, so don’t panic. Spread them out and watch the magic. Hang and let oxidize for 10-15 minutes. Ideally, you let them actually dry and then redip - if you are patient you can do it over several days - me, rarely am I patient. But I try to dip at least 2 times. I have been told that makes the dye more stable — not sure, I haven’t noticed a big difference and sometimes the first dip is a good first color. You do not want the really, really dark color on the first dip, though, it does seem to crock (or rub off) more if the dyebath is too strong.


Indigo oxidation

Repeat several times or until the color is deep enough for your desire.

Always rinse your fiber and cloth in plenty of clear

water, add a little vinegar and soak for 30+ minutes, and then rinse again in clear water, leaving it in over night. Wash in a mild detergent. The vinegar neutralizes the alkaline and stops the process on the fiber/yarn. If not washed off, the fiber can become brittle and damaged.

Indigo oxidation

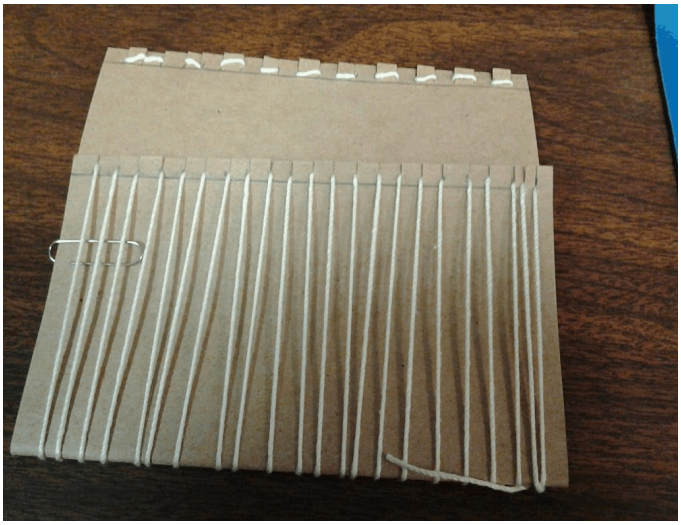
Cochineal magenta

Cochineal red

WEAVING A POUCH ON A FOLDED CARDBOARD LOOM

1 - Decide what size you want to make your pouch. Light cardboard is needed to make the loom. (Like the weight of the cardboard that makes a box of cereal - you can use heavier cardboard boxes with a little adjustment in the design of the loom itself) For the light cardboard, measure the size you want the pouch part and fold it up. Then make sure you have enough for a flap-closure; it can be any length and width you want. The bigger it is, the longer it will take to weave, you might want to practice on a smallish project first.

2 - At each end of the cardboard - top -where the flap is, and the top of the folded part - we will need to make some measurements. Using a ruler, mark .25 inch down from the top of each end, and draw a line across the loom. Then mark .25 inch marks across the tops of each end. You will cut slits down at each of the .25 inch marks down to the .25 inch line. Sometimes with some students, I have them put a paperclip to hold the flap in place, but eventually, they don't need, and some never need it, as they can hold the flap in place and warp at the same time - it depends.

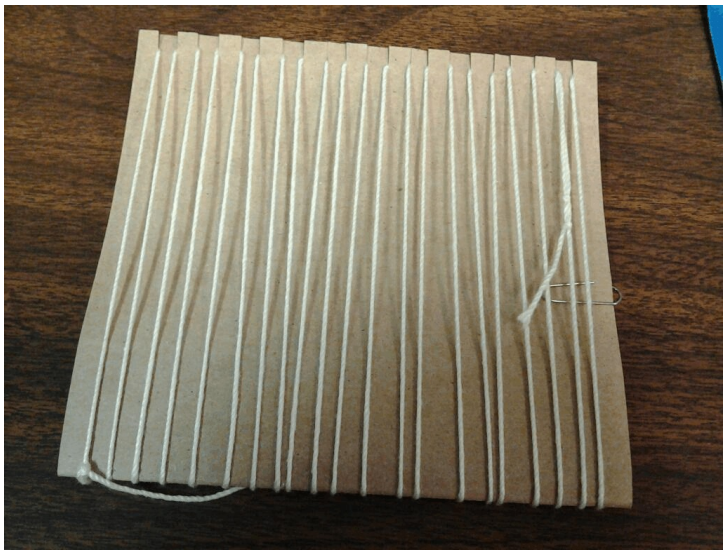


3 - You are ready to warp the loom. Any yarn can be used, but I use a yarn that is a little smaller in size than the yarn I am weaving with. Some yarns are stretchy and that can be a problem. A good cotton crochet thread is a good warp, and easy to purchase at local hobby/craft stores.

4 - With the long back side of the loom facing you, hook the thread through one of the side slits - a tale of about 3-4 inches hanging off the back the bulk of the thread on the side facing you. Draw the thread down, around the folded edge, turning the loom so the short side faces you, bring the thread up and slide it through the slit on the top of the short end. You will take it across the back of the flap to the next slit, bring the thread forward and down, around to the long side and up to the next slit.

5 - When you get to the last slit, put the thread on the slit. NOW COMES THE IMPORTANT PART BEFORE YOU START WEAVING: In order to weave in the

round, you need an ODD number of warp threads. To make the odd number, you will have to fudge a little on the last warping slit. Sometimes you will cut an extra slit to create the extra thread - and then the warp thread will be knotted at the bottom of the fold so that there is only the extra thread on one side.



Then the beginning tail can be slipped over to the slit beside it and tied to that warp thread - MAKE SURE THAT TIED THREAD AND THE ORIGINAL WARP THREAD ARE TREATED AS 1 THREAD WHEN WEAVING. Leave an inch or so when you cut the warp ends, you can cover them while weaving and you don't want to cut them too short or they can come loose.

(I don't know why, but most students cannot stand having ends sticking out, whether it is the end tails or overlapping ends when changing threads within the loom. (Believe me, there are fewer cutting mistakes, if students can be encouraged to hold off cutting ends until they have woven a little more past the overlaps)

6 - Now if you count the warp threads across the flap and back, you will have an odd number of threads. You also have a warp sett of just 4:1. That means in each inch you have 4 warp threads. If you want a closer set (for a stronger fabric weave), you can get about 8:1 by doubling up in the slits, but that should be for more advanced students, because the issues of using a small loom with that many threads.

7 - WEAVING: It is a good idea for students to work with a weft (the thread you weave with) thread of about 1- 1 ½ yds at a time. A longer thread can get tangled and cause all sorts of problems. A blunt tapestry needle is best. I prefer the metal ones, as I have had the plastic ones break.

Changing colors

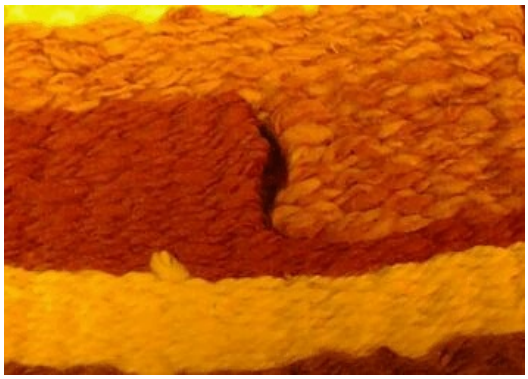
You can weave patterns or create shapes, by changing colors and weaving designs within your weaving. Just remember to interlock the yarns so that there are no holes in your pouch until you want there to be (ex: on the top flap, you can make a button hole, by weaving to the center, turning and weaving back, and repeating that on the other side.

8 - Begin on the top of the short side of the pouch. That way not only does the pouch part get done even if the flap doesn't, but also it will help the folded part

stay folded and not cause issues. When you weave on your own, you can begin and end any where you want to. Always begin weaving in the middle of the piece - do not start and end on the ends, or those sections will work their way loose. Remember the over/under/over weaving, and when you turn to go around the side, make sure if you are “under” the last thread on one side you are “over” the thread on the other side. Turn the pouch in the same direction you are weaving, so that you just keep going around and around. If you have made an error, you will see it right away, when you see that you are going over or under the same thread as the round before. Catch it quick and fix it; it is harder if you have to undo a lot of rounds.

9 - As you weave, push the weft threads up close against each other. You will actually cover up the warp threads and you must weave this very snug in order for the pouch to have any strength at all. Keep pushing the weft up towards the top of the short side of loom. You will work all the way down to the fold, and you will want to keep weaving “one more row” until you cannot do any more rounds. Then you will weave several rows across the bottom of the fold, ending with the last weft thread ending in the middle of the bottom of the pouch.

10 - Turn the loom over to the long side. Now you can weave the flap of the pouch. Begin in the middle of the loom and weave up to the top. Make sure you weave a firm, snug fabric by pushing the weft down every several rows. You can create a BUTTON HOLE by weaving across to the middle, and then turning around and going back. You can weave each side that way until you have a hole that the button of your choice can fit through, then finish the flap by weaving the entire width of the loom to close the hole. End off in the center of the loom again.



11 - Now is when I trim all my ends — but I know that generally it is only the last of the threads that will need trimming. I like to put the fringe on the bottom of the pouch at this time, if I want fringe ----- the fringe will help stablize the pouch, especially when younger students have made them. Have them cut threads and tie them to each of the warp threads at the fold. If they cut them longer than they want them, they can trim them after to make them look nice, they can put beads on them or twist the fringes.

12 - Now is the time to check one more time to make sure the weaving is tight and covers the warp threads to make a firm fabric. To remove the loom, fold down the slits and carefully slip the warp loops off the cardboard. Then you can fold the loom lengthwise to make it easier to get it out of the pouch. Do it slowly to make sure you don’t snag or catch any threads. You can sew on the button, add handles, or whatever embellishment you want. A simple lining can be added also if the students can sew.

Make your looms from different materials, old picture frames, wooden pieces, branches from the trees in the school yard; let the students think up their own looms - make the looms part of the art, or not.

RESOURCES

Dharma Trading
800-542-5227
www.dharmatrading.com

Earth Guild
33 Haywood Street
Asheville, NC
800-327-8448
www.earthguild.com
-misc weaving, spinning & dyeing supplies

Georgia Sheep and Wool Growers Assn
gasheepandwool.org
listing of Sheep Raisers in Georgia for wool sources

Hobby Lobby
-braiding looms and yarns

your own local hardware store or:
Intown Ace Hardware
1404 Scott Blvd
Decatur, GA 30030
or: Handy Hardware
Lawrenceville Hwy
Tucker, GA
-hardware for drop spindles, backstrap looms

Jo Ann's Stores
-yarns, beads, misc crafting supplies

Michael's Arts & Crafts Stores
-cotton yarns, beads, misc

The Woolery
315 St. Clair
Frankfort, KY 40601
orders: 800-441-9665
www.woolery.com
-misc spinning supplies, good book & video list

WEBSITES:
www.aurorosilk.com
www.paradisefibers.net
wildcolours.co.uk

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