

CLOTHING: PREPARATION OF MATERIALS FOR RAVENSTAIL WEAVING GR: 6-8 (~2 WEEK LESSONS)

Elder Quote/Belief:

“Ravenstail weaving and spruce root weaving are some of the greatest traditional art forms lost from our region, but slowly, with the help of traditional experts, we are bringing this lost art back. We are relying on other culture’s assistance to help with revitalization weaving and I am happy to say that we now have weavers in our community!

Quyana goes out to Teri Rofkar, Jennie Wheeler, Kay Parker and many others who have made this possible!”
 -MaryBabic, Cordova



“Traditional methods of gathering and weaving natural materials help me link past, present, and future.”
 -Teri Rofkar, Sitka

Grade Level: 6-12

Overview:

Ravenstail geometric shapes were inspired by basket designs. The highly decorated blankets were “robes of nobility”. The hierarchically organized motifs worked into the blanket were a statement of the wearer’s status. The blanket served as both a physical and a symbolic barrier between the nobility and the common people.¹

[Explorer James] Cook noticed a few woolen blankets similar to those of the Nootka. It must be assumed that they were traded from the Yakutat. After the arrival of the Russians, the Chugach learned to weave blankets of mountain goat wool themselves. Chiefs wore ordinary Pendleton blankets with a strip of red flannel on which a row of buttons was sewn down each side. The blanket was folded so that the flannel strips fell down in the front.²

Standards:

<i>AK Cultural:</i>	<i>AK Content Science:</i>	<i>CRCC:</i>
A3: Culturally-knowledgeable students are well grounded in the cultural heritage and traditions of their community	F1: Develop an understanding that culture, local knowledge, history and interaction with the environment contribute to the development of scientific knowledge, and local applications provide opportunity for understanding scientific concepts and global issues.	CE2: Students should have knowledge of traditional and contemporary sewing and clothing using skins and furs.

¹ Crossroads of Continents Cultures of Siberia and Alaska

² The Chugach Eskimo



Simple cordage made from raw hide
Made by
Patience Andersen-Faulkner, Cordova



Teri Rofkar
1964 Earthquake Robe

Rofkar wove in geometric patterns with images and symbols to evoke that story. The robe represents the accurate direction of earth's movement. Its top border, a traditional design called "Bear Tracks," represents the weight of a large bear as he compacts and shifts the earth under his feet, just as the earthquake did to Fourth Avenue in Anchorage.

The large wave pattern at the bottom of the robe represents the tsunami, which was over 67 feet in places, and the fire it caused in Seward.

The cross was a reminder that before the state of Alaska was bought by the United States in 1867, the Tlingits were ruled by Russia.

Lesson Goal:

To become aware of the materials used for making a woven mountain goat wool robe worn by both the Chugach and Eyak people. Students will learn how our ancestors processed mountain goat fleece to make wool for weaving into robes, also known as Ravenstail robes. This lesson will also emphasize how innovative Alaska Native people were with their development of clothing and how the type of clothing depended on functional considerations. There was much trading happened amongst our ancestors and these robes were most likely traded between the Tlingit and Yakutat people. Through this trade, the Chugach learned to weave blankets of mountain goat wool themselves. These robes were mainly worn for celebrations.

Lesson Objective(s): Students will:

- Learn how the mountain goat undercoat (fleece) was collected and the process of thigh spinning to make wool yarn used for the Ravenstail robes.
- Practice the art of thigh spinning natural fibers into yarn.
- Learn how to make a Ravenstail bag using mop yarn.

Vocabulary Words: Sugt'stun Dialects

English:	Prince William Sound:	Lower Cook Inlet:	Eyak:
Mountain goat	pennaiq	pennaiq	dlaaq'Aya'
ancestors			qaadALyAX yiinhinuu

Materials/Resources Needed:

- Access to internet for research
- Computer with projector
- Amazon-Merino Wool Roving-1 Lb. Paradise Fibers 64 Count Undyed Merino Top - Highest Quality SPINNING FIBER Luxuriously Soft Wool Top Roving drafted for hand spinning with drop spindle or wheel, felting, blending and weaving. By [Paradise Fibers](#)
- Additional source to order merino wool roving - Northwest Coast Weavers Supply
 - www.northwestcoastweaverssupply.com

Following are supplies necessary to weave a Ravenstail bag with mop yarn:

- 4 ply mop cord. To order-The Weaving Works Seattle Washington- a \$40 spool will make 100 bags☺
- Knitting or craft yarn-4 ply
- Yard sticks for each student. Drill a hole every inch. Look at page 3 in *Dictionary for Ravenstail Weaving Techniques* for more details.
- Felt or leather to make a bag to attach the finished Ravenstail weaving.
- Scissors

Books & Documents:

- *Ravenstail Weaving Patterns and Projects Ancient and Contemporary*
- *Dictionary for Ravenstail Weaving Techniques and Instructions for A Beginning Project and a Treasure Pouch*
- *Crossroads of Continents*

Teacher Preparation:

- Invite an Elder/ Recognized Expert who has led a traditional lifestyle in your community. Ask to share subsistence values, experiences, and stories pertaining to weaving. Ask the Elder to share their knowledge of traditional materials used for weaving Ravenstail.
- Review with the students the proper ways to show respect for the guest speaker.

- Review *Crossroads of Continents*-pages 217-218.
- Review the following websites:
 - Alaska Weavers Seek Mountain Goat Wool by Riley Woodford
 - http://www.adfg.alaska.gov/index.cfm?adfg=wildlifeneews.view_article&articles_id=403
 - Thigh spinning demonstrations
 - <https://www.youtube.com/watch?v=FXv6E04oAIE>
 - https://www.youtube.com/watch?v=23l6wbO_1qY
 - Mountain goat preparation Ricky Tagaban-Thigh Spinning
 - <https://www.alaskapublic.org/2014/07/18/ak-weaving/>
 - Ravenstail weaving demonstration with Kay Parker
 - <https://www.youtube.com/watch?v=NgYu1RQpGWw>
 - Teri Rofkar-
 - AK Women’s Hall of Fame
<https://www.youtube.com/watch?v=CNLkfIsjaPw>
 - Weaving Stories <https://www.youtube.com/watch?v=uMOFjfl5LM>
 - The Artistry of Tlingit Weaving – Teri Rofkar and Shelly Laws
<https://www.youtube.com/watch?v=eKyB6H3QEjY>
 - Patience Andersen-Faulkner demonstrating twining
 - <https://www.youtube.com/watch?v=Ggh5Xy9pUMw>
- If making a mop rag Ravenstail bag with the students:
 - Review Ravenstail-Beginning Project page 1-13 from the booklet, *Ravenstail Weaving Patterns and Projects* (in kit).
 - Drill holes every inch down the yardstick- need one yardstick per student.
 - Weave a prototype of the bag for an example for students to see for this lesson.

Opening: While in the Chugach territory, explorer James Cook noticed a few woolen blankets similar to those of the Nootka (indigenous peoples of the Pacific Northwest Coast in Canada). It must be assumed that the Chugach traded from the Yakutat. Then after the arrival of the Russians, the Chugach learned to weave blankets; similar to woolen blankets out of mountain goat wool themselves.³

The Chugach and Eyak were very innovative with development of their clothing. The Chugach learned to weave Ravenstail robes. The Eyak did not know the art of weaving themselves. The woven blankets worn by the Eyak were traded with the Tlingit. Trade was very important amongst the different Alaska Native people. Ravenstail geometric shapes were inspired by basket designs. The highly decorated blankets were “robes of nobility”. The hierarchically organized motifs worked into the blanket were a statement of the wearer’s status. The blanket served as both a physical and a symbolic barrier between the nobility and the common people.⁴ These robes were mainly worn by a chief during a celebration.

Which brings us to, historically; people have always spun with a variety of animal fibers to make clothing. Mountain goats are related to musk oxen. They have a beautiful dense white coat. Chugach were aware that mountain goat put on a thick fleece undercoat to help them through the

³ The Chugach Eskimo

⁴ Crossroads of the Continents Cultures of Siberia and Alaska

winter months. To collect the wild fiber, Chugach would hike up the mountains to gather any fleece that would shed off on brush and rocks or strip the hides of animals harvested for food. These fibers were made into roving and then thigh spun to create yarn for weaving into beautiful robes.



Mountain goat fleece undercoat-
so fluffy and soft



Mountain goat roving ready to
thigh spin

Activities:

Class I: Ravenstail material preparation.

This class will be a two to five day class, depending on how many different natural fibers/materials the teacher would like to make into cordage. It is mainly to inform the students on traditionally how Chugach spun mountain goat undercoat to make yarn for their robes.

1. Ask students to pay close attention and take notes as they watch the YouTube video on thigh spinning. -Thigh spinning demo <https://www.youtube.com/watch?v=FXv6E04oAIE>
2. Public radio -Mountain goat preparation Ricky Tagaban-Thigh Spinning
 - <https://www.alaskapublic.org/2014/07/18/ak-weaving/>
3. Give each student a handful of wool.
4. Ask students to separate the wool into two combed out lengths.
5. Have a small hand towel and a bowl for water available at each table for students to use
6. Ask the students to take their wool and practice the art of thigh spinning.
7. Optional: Teacher can show another video on making cordage-beach grass, stinging nettles, willow saplings, and spruce roots. These materials could be gathered by the teacher or a field trip for students to gather these materials themselves. Similar weave as the one used with yarn to make Ravenstail weaving.
8. How to Make Cordage from Natural Materials
 - <https://www.youtube.com/watch?v=XG93xPsxeHg>
9. Discuss with students that after viewing these videos and trying the spinning themselves, just imagine how much time it took to gather enough materials to make a Ravenstail robe.
10. A good video to watch to obtain more information on these robes and how long it may have taken to save enough thigh spin cordage to make one a Ravenstail robe is the YouTube video- The Artistry of Tlingit Weaving <https://www.youtube.com/watch?v=eKyB6H3QEjY>

Class 2: Ravenstail style woven bag made from mop cord. *Please note: This is typically a two week class to finish project!*

1. For each student, print instructions for weaving bag- pages 1-11, materials page and how much warp and weft to cut page 13- out of *Dictionary for Ravenstail Weaving Techniques and Instructions for a Beginning Project and a Treasure Pouch*.
2. Each student should also receive enough mop cord and yarn for project. They will also receive a yardstick that has been predrilled (loom).
*Note- Yard sticks (from any hardware store). Drill a hole every inch. Look at page 3 in *Dictionary for Ravenstail Weaving Techniques* for more details.
3. Follow directions on how many and how long mop cord and yarn are to be cut. Follow directions for preparation.
4. Before students start to weave please view following YouTube tutorial- Ravenstail weaving demonstration with Kay Parker <https://www.youtube.com/watch?v=NgYu1RQpGWw>
5. *Ravenstail Beginning Project* directions. Start at page 2 warping the loom and follow along through page 11.
6. When complete attach to hand sewn leather or felt bag. Display.

Assessment:

- Students can identify how and where mountain goat fleece and fibers were collected.
- Students can explain and show how the mountain goat undercoat (fibers) was processed (thigh spun) to make yarn for the Ravenstail robes.
- Students can explain materials needed to make a Ravenstail bag, what type of loom is used for weaving Ravenstail, and the difference between warp and weft.
- Students can correctly say and point out the Sugt'stun/ Eyak words for mountain goat and ancestors.



**Ilanka Cultural Center
Ravenstail Child's Robe
woven by Teri Rofkar
Merina Wool, Sea Otter Fur
2006**

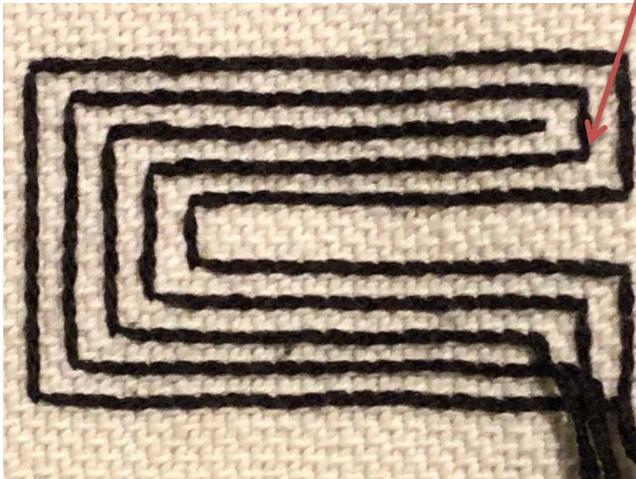
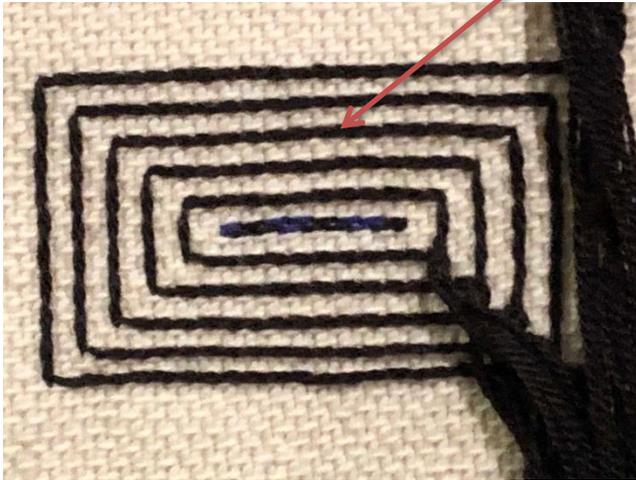
The story behind the robe...

“My first trip to Cordova, Alaska was to teach how to gather spruce roots for weaving. We journeyed out to Strawberry Point on Hinchinbrook Island where traditionally the Chugach gathered their spruce roots. We traveled there by boat on a beautiful spring day. The sky was so blue and the geese were migrating back to their spring and summer stompng grounds. We pulled up to the beach and the first thing we saw were brown bear tracks...”





The patterns along the side border and in the center of the robe are traditional Ravenstail designs. There is the 'Box within the Box' and the 'Double around the Cross' design, which could also represent Cordova and copper.

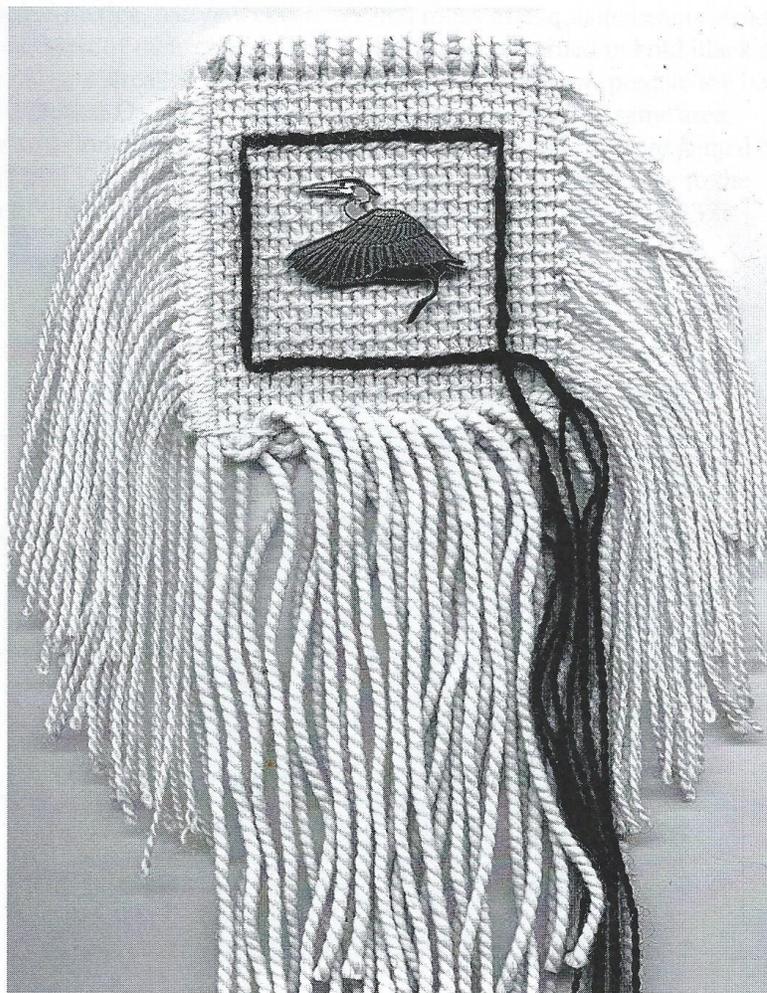




The pattern at the very bottom of the robe is the “eena” design, which is the forked stick that you pull spruce roots through to remove the bark.

(This Ravenstail robe belongs to the Ilanka Cultural Center and is used for dancing with the Cordova Ikumat Dancers).

RAVENSTAIL A BEGINNING PROJECT

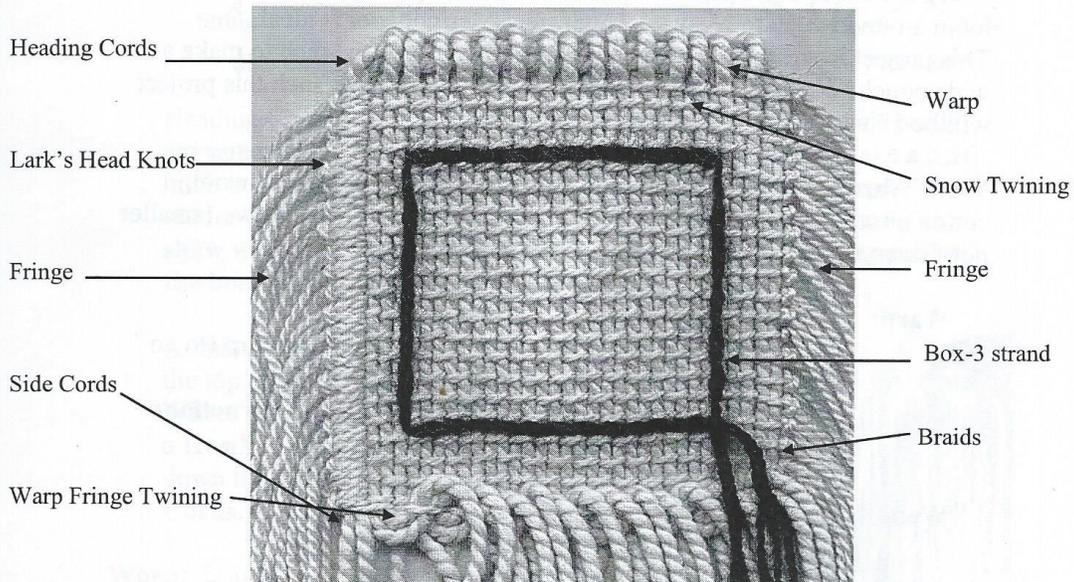


By Marcia Stier, Kay Parker, Mary Lou King, Marguerite Fiorella
Juneau, Alaska
Revised 2010

RAVENSTAIL, A BEGINNING PROJECT

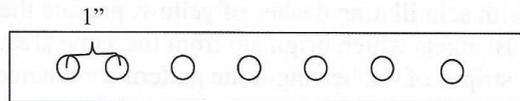
Ravenstail Weaving—Until two hundred years ago, on the Northwest Coast of North America, native weavers created robes of exquisite beauty to adorn the wealthiest of their noble class. These robes, patterned in bold black and white designs streaked with scintillating dashes of yellow, predate the better known Chilkat Dancing Blankets which originate from the same area. Robes with longitudinal stripes of the herring-bone pattern were named Yel-ku uu (Yeil Koowu) the raven's tail from the resemblance it bore to the vanes of the tail feather of that bird according to (Emmons 1911:332)

Parts of Ravenstail Beginning Project



Materials Needed: Loom, material for warp and weft, 3 feet of strong cotton string (not yarn), a needle with a large eye and blunt end, scissor and ruler.

Loom: A flat wood board such as a yard stick with ¼” holes drilled one inch apart measured from the center of the hole.



When ready to weave the loom can be tied or taped to the back of a chair which is placed on a table or other place so that when the weaver is seated the weaving is slightly below eye level or a comfortable height for each individual.

Warp: Yarn or other dense cord like material that hangs down from the loom around which to weave – Thigh spun Merino wool is ideal. This project is written for warps that hang down 10 to the inch to make a 3” wide pouch. If you use larger warps that hang down 6 per inch this project will be 5” wide.

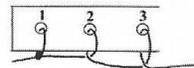
Weft: Yarn for weaving – 2/6 high twist yarn is ideal -- Merino wool, cotton or other available two ply yarns in white, black, and yellow. (smaller not fuzzy yarns look nicer)

Warp: 15 20” white warp
 1 48” **Heading Cord** and **Side Cords** white warp (to go across the top and down both sides)
(10 yards warp per side of Bag. These instructions are for one side)

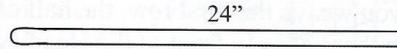
Weft: 20 9” fringe white
 22 18” white weft weavers
 3 28” black weft for the box

Warping the Loom:

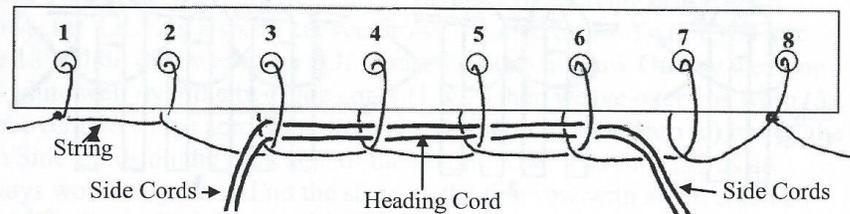
Thread the needle with a 3 foot long lacing cord of strong cotton string. Insert the needle in hole #1 and secure end of lacing cord to board with a knot. Next insert needle in hole #2 and making a half hitch in this hole, then carry lacing cord to hole #3 making a half hitch.



Next find the center of the 48”
Heading Cord making it into a
 double cord.



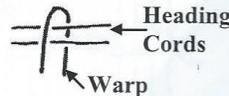
Insert the doubled **Heading Cord** between the board and the half hitch in hole #3. Pull string, that is now around the heading cord, and the Heading Cord, tight against the board. Continue making half hitches around the Heading Cords in holes #4, #5, and #6. Drop the Heading Cord after hole #6. Be sure the string is tight all the way across and the



Heading Cord is snug and straight up against the board and side cords are same length on both sides – pull and adjust as needed. Make a half hitch in hole #7 with just the string and thread the string through #8 and secure with a knot. **(The illustration shows the string loose only to show where the heading cord goes, yours needs to be tight against the board beginning with #1 and ending with #8.)**

At this point the doubled Heading Cord goes across the top of your project and hangs down both sides. Where this double cord is across the top, it is called a **Heading Cord**. Where this double cord hangs down the sides of your project they are called **Side Cords**.

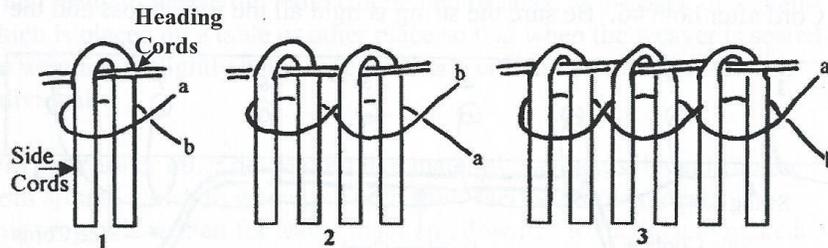
Warp: Using the 15 – 20” white warps, hang 5 warps in each inch doubling them over the heading cord and string (this will make 10 warp ends in each inch). Even the ends of each warp. Tie the warp into 3 bundles very close to their bottom cut ends.



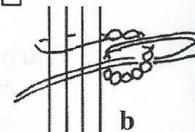
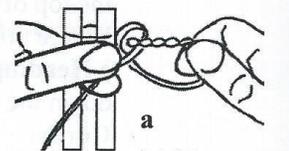
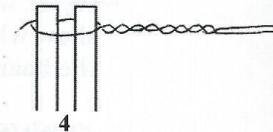
BEGIN WEAVING

- A. The **first row** sets the tension of your weaving. As you weave this first row, the half of the warp that hangs in front of the Heading Cords will always go to the left of the half that hangs behind the Heading Cords.

Two-strand Twining is a weave in which two wefts cross each other as they move to enclose successive groups of warps. To do two-strand twining from left to right:

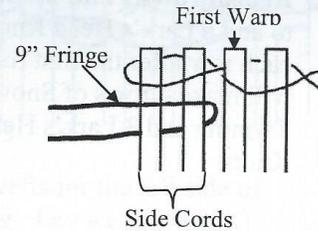


1. Double a weft over two warps on the left. Move weft (a) in front of the first two warps then over weft (b) and then behind the next two warps. Weave this row tight against the heading cords.
2. Weft (b) comes from behind the first two warps then underneath weft (a) and in front of the next two warps.
3. Continue across the row using this technique.
4. Finish row with **Overhand Knot** by pulling the two wefts straight out to the right. Then twist them, away from you (in the same direction as the yarn is spun) about 2 inches.
5. Pinching (a) the twist between the thumb and first finger of your right hand so it doesn't unspin, use your left hand to bring the tails up, over the twist, around it and through the loop. Pull on the ends with your left hand until the loop is snugly against the side cords. Pull (b) the tails until this end of string is straight and the knot has moved to the twisted wefts so that the knot lies right next to the side cords. Pinch the 2 wefts near the side cords where the loop is and pull the slack out of knot until the knot is tight against the side cords. This is a very hard knot to get out if you make a mistake, so check your row to make sure it is perfect before you tie it!



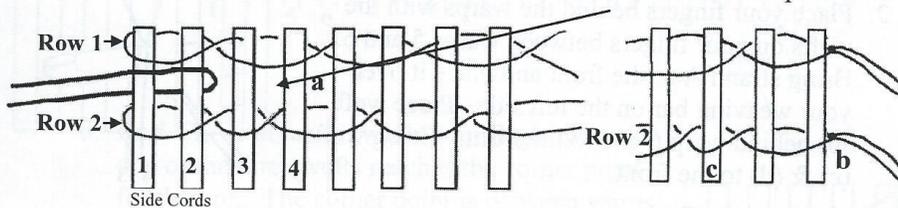
B. Fringe and Lark's Head Knot

The **Lark's Head Knot** is looped around the side cords and encloses a row of Snow Twining. Take one 9" white weft **Fringe** and place it in between the side cords and the 1st warp with one end to the front and other to the back.



C. Second Row of Weaving and Snow Twining

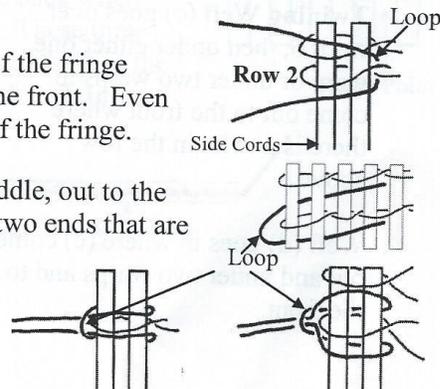
Leave a space between the first and second row of weaving so the warp shows. (a) Leaving a space between rows is called **Snow Twining**. Fold one 18" white weft weaver in half. Start the same as **Row One** by weaving the white weft over the two side cords (1 & 2) then weave over one warp (3), then over two warps across the weaving, ending with one warp (c) before the two Side Cords on the right side of the second row. The Side Cords are always woven together. End the same as the first row with an Overhand Knot (b). Snow Twining is created by repeating these two alternating rows so the twist is in the middle of the stitch above. See between warps 3 & 4.



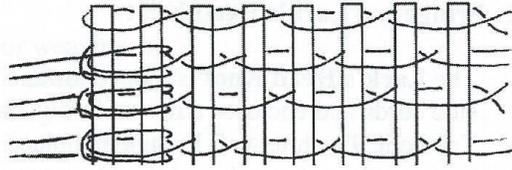
D. Finish the Lark's Head Knot Fringe enclosing Row two on the left Side Cords

To finish the knot bring the back end of the fringe under Row (2) of the weaving and to the front. Even the ends and form a loop on the back of the fringe.

Next pull the loop, holding it in the middle, out to the left edge from behind. Now place the two ends that are in the front through the loop. Pull firmly on the ends. This completes the **Lark's Head Knot**.



- E. **Repeat rows 1 and 2.** Be sure to add a Lark's Head Knot on each row after the first row. This will make 4 rows of Snow Twining and 3 Lark's Head Knots.

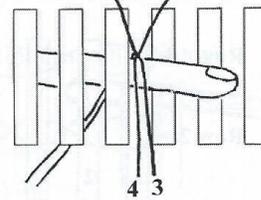


- F. **Box** – Count over 5 warps (count includes **Side Cords**) from the left. The first Box begins between Warp 5 and Warp 6. Count the last 5 warps on the right (count includes **Side Cords**) and mark the fifth warp with a small piece of yarn to show where the first box ends.

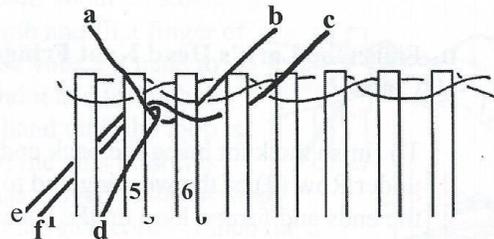
1. **Three-strand Twining, Alison Entry** – Using three black 28" wefts, find the middle of the three wefts and loop one through the other two wefts, stick your index finger through the two, then pinch the two back wefts tight between your left index finger and your middle finger.



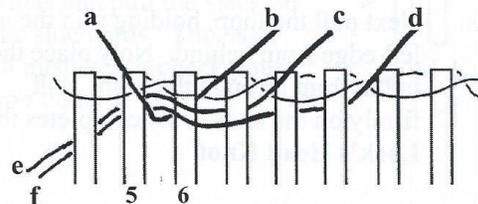
2. Place your fingers behind the warps with the wefts on your fingers between warps 5 and 6. Bring strand A to the front and place it over your weaving bar on the left side. Place weft (b) behind warp 6 and to the front. Bring wefts (c) & (d) to the front.



3. **Weaving Three Strand Twining** Weft (c) goes over warp 6, then under either one warp or under two warps to come out to the front where there is a twist in the row above.

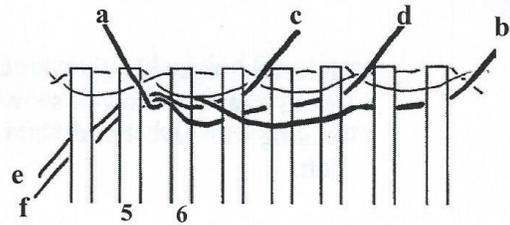


4. Weft (d) goes in where (c) comes out and under two warps and to the front.



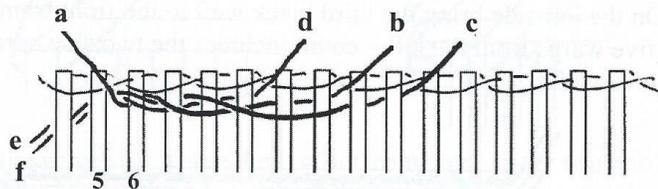
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5. Weft (b) goes over three warps and in where (d) comes out, under two warps and to the front. The three wefts are pushed tight up against the row above.

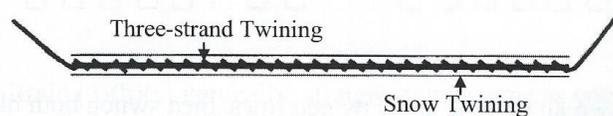
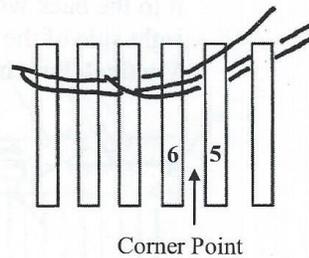


6. Weft (a) and wefts (e) & (f) will become the wefts for the left side of the box using **Three Strand Vertical Twining**. Lay wefts (e) & (f) up over the weaving bar from the back.

7. Next (c) goes over four warps, in where (b) comes out and under two warps. Next (d) goes over four and under two -- continue to the corner point.

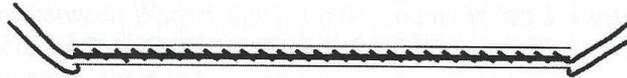


8. **End Three-strand Twining on Right** when one of the three wefts reaches the corner point for the box. The corner point is between warps 5 & 6 counted in from the right side of the weaving. This first weft is brought to the front and the other two wefts go to the back where the first weft comes to the front. These three wefts will be used to make the right side of the box using **Three Strand Vertical Twining**.



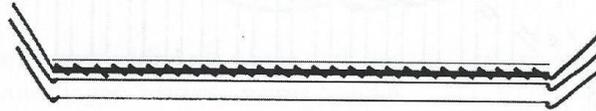
9. Insert a fringe to begin your **Lark's Head Knot**. Using 18" white weft, weave one row of snow twining right underneath the black row ending with **Overhand Knot** and finish a **Lark's Head Knot** on the left.

10. Now bring up one black weft from the back, five warps in (count includes side cords) on each side. These are the wefts that will be used for **Vertical Three-strand Twining**.

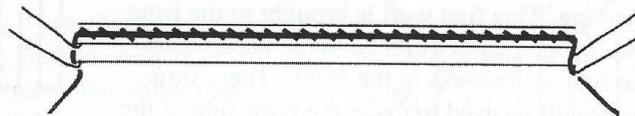


11. Insert a fringe then weave one row of **Snow Twining** leaving the space with the warp showing.

12. On the left side bring the third black weft to the front from the back (five warps from the left – count includes the two side cords), hold all three wefts.



13. Take top weft, put it to the left of the two black wefts below, and drop it to the back where the bottom weft comes out. Do the same on the right side of the weaving. This is called **Switching the Three-strand Vertical Twining**.

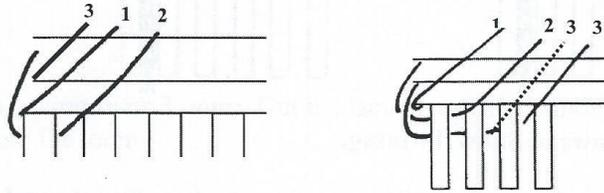


14. Weave two alternating snow twined rows, then switch both black vertical three strands.

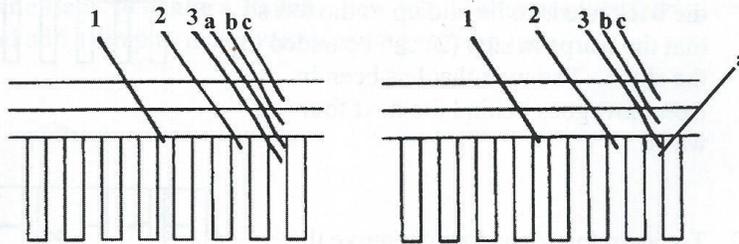
15. Continue weaving two alternating snow rows and adding fringes on the left in each row and switching the two three strands (every two rows) until you have 13 white rows after the black three strand entry (17 white rows total).

16. To close the black three strand box:

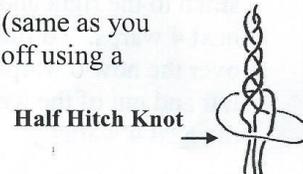
- Bring third black weft (1) to the front.
- Bring top weft (2) down where (1) is coming up, under one and up.
- Take second top weft (3), put it down where weft (1) came out then under two or three warps so that it come to the front where there is a twist in the snow row above.



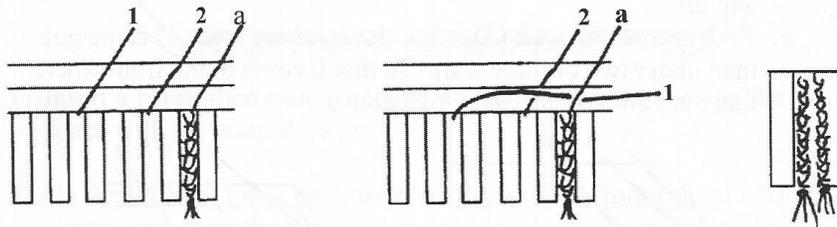
- Twine across (in where the last one came out, under two and up until you reach the other side of the box). The last weft (3) will go over 4 warps and under one warp to reach the corner point. Weave the **Right Bottom Corner** by placing all three wefts (1)(2)(3) up to the front.
- Exchange weft (3) and weft (a).



- Braid (3)(b)(c) vertically, straight down (same as you braid your hair). Braid two inches. Tie off using a **Half Hitch Knot** with a single weft.



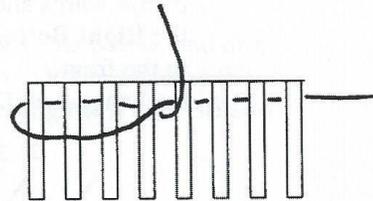
- g. Make sure strand (a) is on the right side of the first braid. This locks the corner together to create a continuous black box. Braid strands (1), (2) and (a), holding them off to the right as you braid.



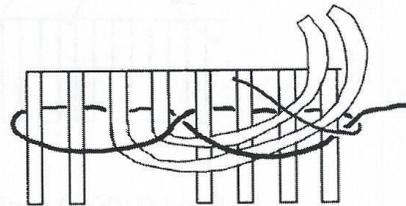
17. Weave 4 rows of Snow Twining.

- 18. Warp Fringe Twining**—Remove the ties from the bottom of the warps. The last row of twining includes a special treatment of the warp fringes to secure them tightly and produce a finished appearance. Warp Fringe Twining is done with a white 18" weft.

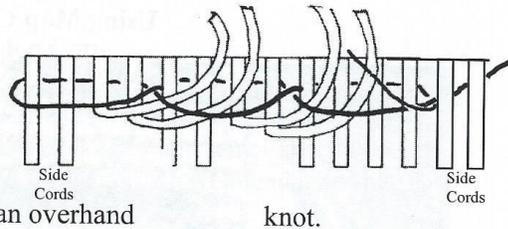
1. To begin Fringe Twining, weave over 4 warps. The weft that has just come from the back needs to be laid up to the left so that the warps in step (2) can be added to the stitch. The weft that has been in front now goes behind the next four warps.



2. To begin the second stitch, move the two warps on the right side of the first stitch to the right and up in front of the next 4 warps. To finish the stitch twine over the 6 warps, bringing the back weft to the front and to the left and out of the way and the front weft goes to the back and behind the next 4 warps.



3. Repeat the instructions for the second stitch and continue this process until the row is finished. End with a stitch around the right side cords and an overhand



Finesse: On small projects, if you prefer, you can do this twining around 2 warps instead of 4. In this case only enclose one warp from the previous stitch.

19. **Remove Weaving from Loom:** Cut the lacing cord and remove the weaving from the loom.
20. **Finish the Weaving:** Lay the weaving on a flat surface and straighten Heading Cords, Trim Fringes and Braids – Pull on heading cords just enough to make them straight across the top. Trim the side fringes to make them the same length on both sides. Trim the bottom fringe to make the warps all the same length. The black ends of the strands from the box braids should be about the same length as the bottom fringe.
21. **Finish the Back to Make a Pouch:** Sew felt, leather or other fabrics on back and add a strap to make your weaving into a pouch.

RAVENSTAIL BEGINNING BAG Back
Using Mop Cord—6 epi



