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# 4 Patterns for American Indian Beadwork

Plus Bonus Guide to  
Native American Beadwork

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**Beading Daily**

TODAY'S HOW-TO FOR HANDMADE JEWELRY

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Plus Bonus Guide to Native American Beadwork

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## 4 Patterns for American Indian Beadwork

### Plus Bonus Guide to Native American Beadwork

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Having grown up in Minnetonka, Minnesota (yes, where Tonka trucks and Minnetonka Moccasins are born), now living in Colorado, I've been surrounded by Native American influences all my life. I remember stumbling upon old redware pottery shards and arrowheads while camping as a kid. I never did discover any authentic wampum (a bead made by hand from the quahog or hardshell clam), but I never stopped looking.

The history of beads and beadwork in early America is fascinating and we're please to share a brief overview with you from David Dean's *Beading in the Native American Tradition*. The pictures and background surrounding the very beginning of beads in America contained in this book are fabulous.

There are also four stunning FREE projects with instructions to get you going on exploring beading with a Native American flair! *Peyote-Stitched Tube Necklace* by Donna Chiarelli is breathtaking. Donna says the color palettes and pattern possibilities are endless. Once you know the beading technique, you can take off with many other varieties.

*Stones and Roses* by Stacey Neilson is done on a loom. This was another popular way Native Americans created jewelry, adornments, and blankets. Most of the stitching we do today is done off-loom, stitching

by hand without the use of a loom. The contemporary look of rose monte'es (rhinestones with a channeled metal backing for thread to pass through in crossing directions) used in a traditional loom stitched design, puts a bit of the past and a bit of the resent together for a delightfully pleasing cuff bracelet.

Lisa Kan's *Painted Desert* necklace is a splash of the Southwest. The color pallet is luscious and filled with traditional Native American elements such as turquoise chips and heishi beads. The turquoise inlayed silver clasp is the perfect finishing touch to this painted desert, perfect with casual jeans or a night out on the town!

Mary Thompson explains her *Ojibwe Pendant* project is an old loom beading technique invented by the Ojibwe people of North America. This piece is woven in a continuous strip, around triangles of unbeaded warp threads. I find the process is as interesting as the finished pendant! Mary has two pendants as earrings and I think these would make great key chains, bookmarks, or sun catchers as well.

Seed beads, as we know them today, were traded as early as 1770 and a pound of beads was worth a finished buffalo robe or a good horse. Imagine that next time you're standing in an aisle of seed beads at a bead show! We bead worshippers feel the love for our beads as we create out beautiful masterpieces, but it's nice to know folks have felt they were as special in the past as they are to us today.

A handwritten signature in black ink that reads "Kristal".

Kristal Wick,  
Beading Daily editor



4 PATTERNS FOR AMERICAN INDIAN BEADWORK  
*Plus Bonus Guide to Native American Beadwork*

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# A Short History of Beads and Beadwork in America

DAVID DEAN



**Cape.** Sunburst pattern worked in lane stitch on buckskin. This is a contemporary powwow piece; the feather motifs and sunburst outlining are not traditional, nor are they characteristic of any particular tribe.

## Glass Beads and Early Trading in North America

Upon the arrival of Columbus and his “discovery” of a New World, Europeans became interested in the many riches that world offered. Furs and timber were plentiful in many regions, and gold and silver were being mined and used for religious items in Mexico, where slaves could be obtained to work the mines. These and other goods held great value for Europeans. In return, the Native populations of North America were fascinated with European technology. Metallurgy, glass making, weaving techniques, and the ability to domesticate horses as beasts of burden held great value for Native Americans.

Before the Europeans arrived, many Native peoples along the coast of the areas now known as Virginia and New England traded among themselves in a product called wampum. Wampum is a bead made by hand from the quahog or hard-shell clam (*Venus mercenaria*). There are only two colors of this type of shell bead: white and dark purple. Wampum beads generally are about one-quarter inch in length and one-eighth inch in diameter. Wampum was very often strung in long strings or woven to form belts. The combinations of certain colors and designs woven in a belt could be used to send messages from tribe to tribe.

When Europeans came to North America, it was immediately clear that their money was of no value. In order to deal with the Native populations, the Europeans had to adapt to the Native barter system. Because of the success that beads had afforded the Europeans with African trade, they became the standard for trade in North America as well. And because of

the way beads were packaged (in large wooden barrels), they made perfect ballast for the large sailing ships. Glass beads soon replaced wampum as the basis for European trade with Native Americans.

## Seed beads come to North America

During the early nineteenth century, millions of large, wire-wound beads and lamp-worked beads were traded with the Native populations. Chevron, padre, melon, French cross, millefiori, and many other types of beads, including small amounts of “E” (size 8°) beads were also traded at this time.

**There is no death.  
Only a change of  
worlds.**

*Chief Seattle, Suquamish*

While this trade was conducted in the West, a new, smaller bead, what we now call the “seed” bead, was being traded to bands of eastern Native people. Starting as early as 1770, seed beads were generally traded by the string or by the pound. Seed beads began making their way across the country, and the first seed beads traded in the West were the above-mentioned size 8° or E. These beads were known as pony or pound beads. The name pony refers to how the beads were transported, and pound refers to the rate of exchange. A pound of beads was worth a finished buffalo robe or a good horse.

When, in the late 1830s, traders brought large amounts of seed beads to

the western plains, they were surprised to find that small amounts of seed beads had already appeared there. These beads came from the East and the South by way of the early Native trade routes and from the North via French Canadians. When the Lewis and Clark expedition made its way to the upper Northwest, members were amazed that while many of the peoples they encountered had never seen a white man, they possessed European trade goods.

## The Beginnings of Native American Beadwork

Before the arrival of glass seed beads, most decoration by Native women took the form of quillwork, painted hides, or woven fibers. The colors that women worked with were earth tones that came from natural dyes and pigments. Although tribal people were impressed with all the colors of glass beads, blue beads in any shade seemed to be considered most valuable. Fascination with the color blue stems from the Natives' difficulty in producing a deep blue from natural dyes and pigments. Reds, yellows, oranges, purples, greens, and shades of these colors were relatively easy to produce. In addition, many Native women considered having beads in light shades of blue like owning a "piece of the sky." Therefore, as trade values were established, blue beads of any shade generally had a higher value than other beads.

In many pieces of early Native American beadwork, it is not unusual to find only two or three different colors of beads. This in many instances stems from the lack of other colors available at the time the work was done. As a way of increasing the value of other colors of beads, many traders would trade in only a few colors. By creating a false sense that a certain bead color was hard to come by, they

could raise the price. In addition, many traders had enough space to deal in only a limited number of beads.

## Native beadwork post-World War II

At the end of World War II, there was much excitement in the Indian community as the "new warriors" returned home from European and Pacific theaters. In Native American culture, warriors are revered as people deserving the utmost respect and honor. Powwows and other gatherings were organized to honor the returning veterans, and this was a time in history that Native people were at once proud of their heritage and proud Americans. There was a great resurgence in Native culture. Powwows became commonplace, and there was a dance going on almost every weekend of the year.

With the revival of Native celebrations came the need for beadwork to decorate the clothes for powwow. In addition, a larger body of serious collectors of Native materials appeared, willing to pay good prices for quality pieces of beadwork. Some beadworkers began to enjoy a reputation among these collectors as artists, and for the first time in Native history, beadwork began to be looked at as art rather than craft.

Pride in Native heritage continued to develop throughout the 1960s and 1970s, and more powwows and Native gatherings began to spring up across the country. With this resurgence of Native pride came new styles of beadwork. As cars and planes made it possible for Native people to travel to Indian gatherings both near and far, tribal beadwork styles became increasingly blurred, and a new style developed called Pan-Indianism. This style of beadwork blended a number of different styles and, for the most part, obscured tribal identity. Beadwork became identi-

fied with regional areas rather than tribal style.

In the 1980s and early 1990s, many Native people and others who studied Native culture began to study old tribal styles of beadwork. This investigation has resulted in a renaissance of many of those styles. In Indian country, it is still possible to find the occasional trading post that sells beads to Native customers, and among them an old stash of beads may be discovered. Beads are also traded and sold at Native gatherings and through mail-order catalogs. These authentic materials help the contemporary beadworker to replicate traditional beadwork.

New styles are being developed among contemporary Native artists, and they exist alongside the historical and traditional beadwork styles. Native beadwork is today, as always, in a state of change, perhaps now more than ever. Many changes are due to the availability of Japanese beads and the learning of new techniques. But the largest reason for change today is the willingness of the artist to step outside the conventional bead box and break some of the rules that traditional beadworkers have clung to for years. Traditionally, beadwork was not produced unless there was a specific use for it. This beadwork could include dance clothes, religious items, or items that could be sold to help support a family or tribe. Today it is common for Native beadworkers to produce beadwork for beadwork's sake, for the art of the work. As this concept grows, items are being made as art objects rather than for utilitarian purposes. It is common today to find Native artists making wall hangings, beaded jewelry, beaded contemporary clothing, and accent pieces to be worn with contemporary clothing. And who knows? Fifty years from now, what is considered very contemporary by today's standards may be considered traditional.

# Tools, Materials, and How to Buy Beads



*Dance Canes and Fan Handles.* Kiowa-style designs worked in gourd stitch. David Dean, 1980s. Collection of the artist.

As with any artistic endeavor, choosing the right materials for the project is critical to its success. Fortunately for beadworkers, the tools and materials used, other than beads, are not many and may already be in your craft stash. Historically, the basic tools used by Native people were very minimal and included an awl, sinew, brain-tanned hides, beads, and in the latter half of the nineteenth century, thread and needles.

As with beadworkers today, Natives had many ways of storing their supplies, and almost all produced storage bags. Many bags were works of art, decorated with all kinds of beadwork. Among the Southern Plains peoples, it was common for a woman to carry a knife, an awl, and some needles on her belt. These tools were the primary instruments for preparing hides. Knives were used to skin and scrape the hides, and the awl and needles were used to sew up holes that resulted from shooting and butchering the animal. A Native woman kept these items close at hand while doing her daily chores. Similarly, the contemporary beadworker should have tools designated as “beadwork” tools and should keep them in a place reserved for beading supplies and projects.

## Lighting

The most important tool for a beadworker is good light. Even beadworkers with fine eyesight depend on light to help them produce quality work. In days of old, most beadwork was done in the light of day to insure proper production, and the best lighting is still natural. If you have the opportunity to design your own work space, large windows placed high on the north wall will provide a consistent, full spectrum of natural light.

There are several lighting options for beadworkers. Lamps with high-watt in-

candescent bulbs are best, but they can create high heat. Fluorescent lights can be good to work with because they offer a fair spectrum of light yet give off very little heat. Halogen lamps are another alternative, but they, too, produce a lot of heat. Full-spectrum lights such as those offered by Ott are a good choice; the bulb is fluorescent so little heat is given off. Experiment with different lamps in combination and figure out what works best for you.

In addition to type of light, lamp placement is critical when you're working with beads. Place the lamp in a position that focuses the most light on the work without throwing shadows.

## Awls and Needles

Made from a buffalo shoulder or leg bone, traditional Native awls were often the only tool used for beadwork; they punched holes in soft buckskin through which sinew could be threaded to attach beads. In some tribes, crude needles were also fashioned out of bone. As technology and trade improved, iron and steel awls became commonplace among Native people, and when iron and steel needles were developed, they became the preferred tools for doing beadwork. Unlike current practice in our disposable society, Native women would use a needle until there was nothing left to work with. If the tip of the needle broke, it was routinely resharpened and used until it could no longer be sharpened. Special cases to store needles were built not only to protect a needle from damage but also to prevent it from being lost.

Today beadworkers have a variety of needles and awls to choose from. With improvement in metallurgical technology, tempered awls and needles are readily available and represent valuable tools for all craft workers. Awls used in leath-

erwork can be used to produce beadwork on leather. You may also create an awl by gluing a handle to a large leatherworking needle. See the sidebar below.

Needles come in a variety of styles and sizes; the higher the size number, the smaller the needle. Needles most commonly used for beadwork come in two styles. First are loom needles that range in length from two to three inches. The other style needle is called a “sharp” or “short” needle due to its length and is used for off-loom techniques. There is also a needle on the market called a “Big Eye”; here the eye runs almost the whole length of the middle of the needle and collapses as the needle is used. The “twist” needle is good for stringing large beads and pearls. You may also encounter long beading needles that range in length from ten to twelve inches. These needles are used in bead factories to string beads into hanks.

The most common needle sizes are 10, 12, 13, and 15. When you’re selecting needles, it is important to choose a size compatible with the size of beads you’re working with. Generally, the size of the needle should match the size of the beads.

In addition to beading needles, the maker of Native-style beadwork should have many different sizes of leather needles.

## Thread

Originally, threads used by Native people were made from plant fibers or sinew. Plant fibers were braided or twisted into thread by a number of different methods. Because this thread tended to be somewhat thick, it was used with large beads. Sinew was prepared when an animal was killed for its meat.

To prepare sinew for threading beads, first scrape the sinew to remove all the fat, then dry it slowly in the sun to create a piece of material approximately three by fourteen inches. Once dried, the sinew has the consistency of stiff rawhide. To form thread, pull small strips of the fiber from the sinew sheet. Soak this stiff thread in water; once thoroughly saturated, it can be used to sew or string beads. In the past, much sinew-sewn work was done without the aid of a needle. To use sinew without a needle, soak the tip of the sinew and twist it into a needle-like end. Allow the needle end to dry and become stiff. Before string-

ing or sewing beads, soak all the sinew but the dry needle tip in water.

To attach beads to hide, punch holes in the hide with an awl and poke the sinew through the holes.

The major drawback to using natural threads is that they attract bugs that will eat them. This is true of both sinew and plant fibers. The problem can be minimized by storing pieces of beadwork in cedar boxes or boxes with mothballs. Some Native people also used horse tail-hair as thread. Beadwork produced with horsetail usually was worked without a needle and is mainly found in pieces of diagonal weave done by tribes of the upper Midwest.

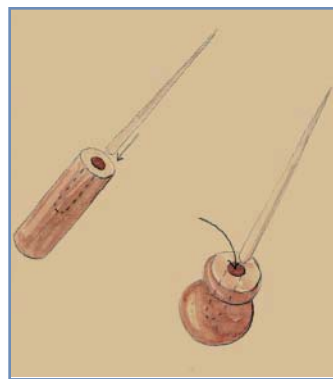
Europeans introduced linen, silk, flax, and cotton threads to the Native population. As trade increased, many women switched from Native-produced threads to European-produced threads. All the above-mentioned threads are made from natural fibers and tend to rot over time. Coating the threads with beeswax increases their life spans. Beeswax also helps keep thread from tangling and aids in threading it into needles. Much of the beadwork held in museums that dates

## How to Build an Awl

One of the most important beadworking tools is a good metal awl to punch holes in hide and to use as a pick to sort and separate threads. Old dental instruments make good picks for moving thread; they can also be turned into awls with the addition of a larger handle.

One of the simplest awls is made from a number 6 or 8 leather-stitching needle. These needles are unique because they are not round but triangle shaped. The edges of the needle actually cut, rather than pierce, hides, and make them easier to sew through. To construct the awl, use a small piece of dowel rod with a hole drilled in the end. Glue the needle into the hole. Other choices for handles include drawer pulls, which can be found at almost any hardware store. The handle should be comfortable in the hand and easy to hold on to. Epoxy glue is the

best for gluing awl tips into handles. It is important to keep an awl sharp. A small triangle file can be used for this purpose. Do not heat the awl when sharpening or the temper will be drawn from the metal and make the tip brittle.

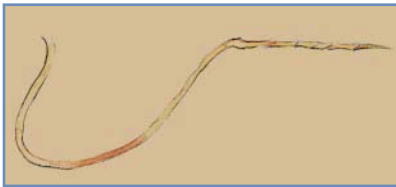


Make an awl with a drawer pull or dowel rod and a leather-stitching needle.

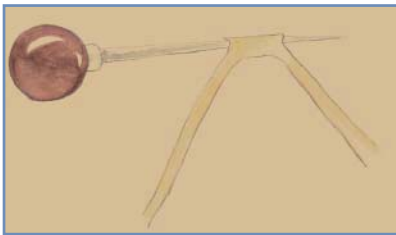
## Using Sinew on Leather



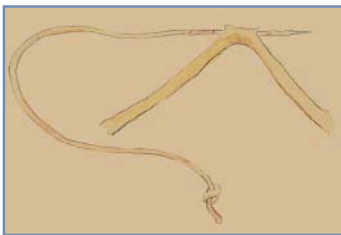
Split sinew using an awl tip.



To make a needle point, wet the sinew, twist it between the thumb and forefinger to form a point, and allow the sinew to dry.



Bend the leather to insert awl tip.



Knot the sinew and pull it through the hole.

to the early 1860s is constructed using cotton quilt and button thread. As technology changed, threads were produced from synthetic fibers. Made in different sizes, these nylon and polyester threads also found their way into the production of Native beadwork.

Today we have a number of choices for creating beadwork. Each thread available today has its own pros and cons. Polyester is the best choice for heddle loom work because it has very little stretch. Many traditional beadworkers still use cotton coat and button thread for lane-stitch beadwork. Nymo thread is good for gourd stitch and appliqué beadwork due to its strength-size ratio. High-tech threads such as kevlar and silamide have not been used in Native work long enough to predict whether Native beadworkers will continue to use them.

The best thread for general use seems to be Nymo well-coated with beeswax. Nymo comes in different sizes, and it is important to choose the size thread that goes with the type of beads and beadwork you are producing. Beads in the 13° range and smaller can be worked with size A, 0, 00, and 000 sized thread. Larger beads can be worked with size B, D, E, and F thread.

### Backing Materials for Native Work

The material of choice for traditional beadwork has been and continues to be either brain-tanned buckskin or fine woolens of the type handled by early traders. Brain-tanned buckskin is conditioned rawhide—if it gets wet, it will quickly turn stiff. To keep buckskin soft and pliable, the hides are routinely smoked. Smoking closes pores in the hide to keep it supple, and also adds color to white tanned hides. Smoking also shrinks hide, so it is important to stretch smoked hide before using it. To stretch a hide, tack the top to a large piece of plywood or other flat surface. Spray the hide with water, pull in all directions, and tack it down along the edges. Once the hide is dry it is ready to work with. By following this stretching process, you can expect to gain about

nine more inches of usable size from a full hide.

Tanned hides were smoked by being hung in the top of tipis, close to the smoke hole. On the southern plains, hides were typically not smoked as heavily as hides in the North, probably because the winters were shorter. The shorter smoking of southern hides produced buckskin of a lighter color. Color of hide was also determined by the kind of wood used to smoke it. Southern hides would be shades of light brown or tan, northern hides were dark tan to almost chocolate color.

Commercially tanned hides can be substituted for brain-tanned hides and are more accessible to most beadworkers. The major difference between brain-tanned hides and commercially tanned hides is the removal of the scarfskin with the hair from brain-tanned hides. Without the scarfskin, the brain-tanned hide appears to be suede on both sides. When you're purchasing commercial hides, look for evenness. Hides should not be too thick in some areas or too thin in others. When you're producing work on commercially tanned hides, work on the flesh or suede side to give the finished product a Native look. Thin elk hides are good for sewn beadwork. Currently a number of companies are producing a brain-tanned look-alike hide. These hides are suede on both sides and come in colors that match smoked hides.

Very tightly woven wool fabric, used to make military uniforms of the day, was a common trade item during the 1700s and 1800s. Like many items traded to Native people, wool quickly became a material to decorate with beadwork. Many woolens had a woven selvedge to prevent the cloth from raveling. This selvedge was often of a different color, the most common being black, navy blue, or scarlet red. Native people often worked this selvedge into a piece of clothing to make it multicolored. Much appliqué beadwork was produced on this type of fabric.

Canvas can be used as a substitute for buckskin. The difference in technique when working with canvas is that the needle is brought all the way through the



fabric; with buckskin, the needle goes only halfway through the hide. Canvas can be a good backing material for beadwork that is to be worn, such as for dance clothes. Canvas takes sweat and moisture better than buckskin.

Velvet was a common backing material with eastern tribes, and it was often backed itself with brown paper sacks.

Today there are a number of fabrics that can be used to back Native beadwork. Generally, you want a material that will allow beads to stand up evenly. Two pieces of mending fabric with typing paper ironed in between makes a good backing material for a lot of beadwork. Layers of canvas sewn together also make a good stiff backing. Wool is still a good choice for prairie-style beadwork, which uses curvilinear designs. The wool is easy to work with and is historically correct.

## Scissors and Cutting Tools

As their main cutting tool, Native beadworkers generally used knives that were first built from chipped flint and later made of iron or steel. Most beadworking knives were small, with blades less than four inches long. This same knife was used to skin and dress hides, cook dinner, and perform many other daily chores. As scissors became a common trade good, Native beadworkers quickly understood this tool's ease and convenience. Overnight, the simple scissors became one of the hottest items offered by European traders. Unlike European women, Native women used their scissors over and over, sharpening them repeatedly until they would no longer function.

The types of scissors produced today have made beadwork easier than ever before. Micro-point scissors and good leather shears are key to producing Native-style work. Even if you need to cut corners when buying equipment, never underestimate the value of good scissors. Have your scissors sharpened regularly and oil the joint occasionally. These two procedures alone will prolong the life of your best scissors for years.

In addition to scissors and shears, a



Trays of beads for sale at the Crow Fair, Crow Agency, Montana. August 1998.

good razor knife is hard to beat for cutting threads extremely close, cutting out appliqué work, or finishing the edge of a rosette.

One of the best tools to come along in the last few years for cutting hides, cloth,

and other types of bead backings is a roller knife. These knives have replaceable blades and, when used with a straightedge and cutting board, can make a perfectly straight cut. This tool is most valuable for cutting buckskin or ultrasuede into fringe. It is wise to keep an extra blade on hand because they do wear with continual use.

## Pliers

Although not historically used by Native beadworkers, a small pair of pliers is an essential beadwork tool. Pliers can be used to break beads from the thread as they are strung—if you string too many, or an incorrect size, it is easier to break the offending bead(s) than restringing the whole lot. Small ignition pliers used for automobiles work well and fit easily in your beadbox. Pliers can also help attach buckskin to solid objects like fan handles. Glue the buckskin down with white craft glue, then pinch the seam with pliers where the ends of the buckskin come together.

## Needle Cases

Native women made small cases for needle storage, generally of hard leather or rawhide decorated with beadwork. Today, one of the first projects you may want to bead is a needle case. You can use a turned wood needle case, an old pencil lead case, or almost any type of small container. A small metal box with a magnet strip stuck to the inside lid makes a great needle case.

## Beeswax and Thread Conditioners

Native beadworkers have used beeswax since they began to do beadwork as an art form. Not only does beeswax keep thread from tangling and raveling, it fills up the holes in the beads and keeps them from moving around in the completed work. When you're buying beeswax, smell it to determine the honey content. The stronger the honey smell, the better the wax.

A number of thread conditioners have been invented to replace beeswax. Some are good, some are not so good. I still use beeswax. Many people complain that bees-

wax compromises the look of the finished piece by adhering to the beads. You can avoid this buildup by spraying a soft cloth with window cleaner and gently rubbing your finished beadwork. This treatment removes not only beeswax but fingerprints and body oils from the completed beadwork and makes the beads sparkle.

## Bead Storage

As you carry on your journey with beads, particularly if you become a “power buyer,” you will undoubtedly find storage of these little spheres of glass a problem. Many people store beads in plastic tubes, small medicine bottles, or any variety of small containers. For years, I have routinely stored my beads in plastic peanut butter jars. My jars each hold a half kilo of beads, which is more than most people will buy. Native women stored beads in small, easily portable bags made of buffalo bladders or scrotums. Most Native beadworkers did not keep a large stash of beads, preferring to trade for them as needed. Another traditional Native way to store beads was in small pine needle baskets with tight fitting lids. There are many storage gizmos on the market today, and the key to efficient bead storage is finding a system that works for you.

## Beads and How to Buy Them

The history of the beads used in Native American beadwork is of great interest, and being able to identify the type of beads used becomes very relevant when stabilization or reproduction work takes place. (Stabilization is work done to stop or slow the aging process on beadwork held in museums.)

### Italian seed beads

The Italians, originally on the island of Crete and later on the mainland, developed the first seed bead production facilities. Historically, Native people traded for Italian seed beads, which were typically finished by hand. Long glass tubes were given to women in a cottage industry who cut them to size and finished them by hand, placing them in a keg with sand

and slowly turning the keg over a fire. The hot sand worked as a polishing agent. Because they were finished by hand, old Italian beads tend to be very uneven, and sorting out misshapen beads was a typical process in the creation of Native work. For very fine pieces of Native work, sorting was one of the most important production processes. The Italians used a different bead sizing nomenclature than what we are familiar with today. An Italian size 4° bead is approximately the same size as a Czech size 12° bead. An Italian size 5° is about the size of a Czech 13°. Italian bead production stopped during World War II and Italian beads are now considered antiques. Italian beads came in softer colors than Czech beads, and it is common to find Italian beads with a purple or blue hue that results from the glass-making process.

In addition, many Italian colors had a “greasy” hue, and the names that these beads eventually became known by were often determined by that trait. Greasy yellow, sea foam green, and greasy blue are just a few color names for popular Italian beads. The Italians also produced the first white lined or “white heart” beads, invented to make colored glass go twice as far. White or clear glass was used for the center and then the bead was dipped in colored glass.

Italian beads were generally packed in bulk and not on hanks as Czech beads are. Italian beads are sold by weight today, usually by the ounce or pennyweight. Some colors of beads weigh more than others because of variation in the weight of the metals added to produce the colors. Adding gold to glass produces red, adding copper produces green, adding aluminum produces blue.

### Czech seed beads

As bead technology spread throughout Europe, the Czechs became the leading producers of beads traded in the Americas, particularly after 1890. Czech beads generally are bolder in color than their Italian counterparts. The Czechs took bead technology one step further than the

Italians did by mechanizing manufacture. As a result, the beads became more uniform in shape and size, and sorting Czech beads, which tend to be somewhat donut shaped, is not critical.

Czech bead sizing is based on how many rows of beads it takes to equal one inch; if it takes eleven rows, the bead size is 11°. The smaller the bead, the more it takes to make the same length, therefore the larger the size number. Common Czech sizes are 10°, 11°, 12°, 13°, 14°, 16°, 18°, and 20°. Any bead smaller than a size 13° is considered a fine, petite, or micro bead. These small beads were not produced after World War II, so like Italian beads, they are now considered antiques.

The Czechs were the first to produce cut beads in large numbers; cut refers to beads that are faceted. The flat cut portion is polished to give the bead a flash or sparkle. Most commonly you will find three-cut or tri-cut beads. Charlotte beads, usually available in size 13°, have a cut on only one side.

The Czechs were also the first to use the hank as a measurement for sale of their product. Most non-cut beads are sold in a hank that has twelve 12-inch loops. Charlotte beads are generally sold in hanks of twelve 6-inch loops.

## French seed beads

While most beadwork produced by Native beadworkers has been made with either Italian or Czech beads, French beads have often been used when Italian beads were not available.

The French began bead production to fill the niche left vacant by Italian bead makers after World War II. Many Italian bead makers never recovered from the devastation of the war, so the French met the demand for the colors of beads that the Italians had produced. The French also produced white heart beads in the same manner as the Italians had, and they became the major suppliers of lined beads.

The French figured out how to put a very large hole into a very small bead, and size 16° French beads can be used with a size 13 needle. French nomenclature dif-

fers from the Czech, and French beads are usually a little larger than their Czech counterparts. Usually a 13° French bead will be comparable to a 12° Czech bead.

## Japanese seed beads

When the Japanese entered the market, bead making took on a whole new dimension. Japanese bead makers computerized the mechanical process used to make glass beads, and the result is a bead that, shape-wise, is possibly the most perfect bead produced. The boxy, squared shape of Japanese seed beads is different from those produced by the Italians, Czechs, or French. Many Native beadworkers will comment that Japanese beads are too perfect and that part of the Native look comes from the use of the more oval Czech beads. The Japanese have also developed beads called Delicas and hex beads. Delicas are more cylindrical than spherical, and hex beads are almost like small bugle beads.

Because Japanese beads come in over 500 colors, it seems that these are *the* beads to work with. However, in order to make so many colors, many Japanese beads are painted or dyed, whereas a red European bead is made from red glass. As finished beadwork is used, the color begins to wear off Japanese beads; for this reason, most Native beadworkers avoid them.

Japanese beads are usually sold by weight. They generally run about one full size larger than Czech beads; a size 11°

Japanese bead is comparable to a size 10° Czech bead.

Always try to buy enough beads of the same color to finish any project you are working on. Beads, like thread, come in different color or dye lots. Once you get halfway through a project, it may be almost impossible to find the exact color you are working with.

One of the most important pieces of advice I have heard in my years of doing beadwork is from George Barth, author of *Native American Beadwork* (Schneider Publishing, 1993): “Know your beads.”

## Estimating the amount of beads needed for a project

One of the toughest things to do is to figure out how many beads you need for a project. Use the following formula to calculate the number of beads per square inch. This formula uses Czech beads as the standard.

- 1) Measure the length and width of your planned project in inches. Multiply the two numbers to get the number of square inches to be beaded.
- 2) From the following table, select the size beads you will be using.
  - 10° = 130 per square inch
  - 11° = 187 per square inch
  - 12° = 228 per square inch
  - 13° = 272 per square inch
- 3) Multiply the number of beads per square inch in your selected bead size by the number of square inches in

your planned project to get the total number of beads needed.

- 4) The following table gives the approximate number of beads per hank.

10° = 3,100 per hank  
 11° = 4,000 per hank  
 12° = 4,500 per hank  
 13° = 5,000 per hank

Select beads per hank for the size bead you will be working with and divide that number into the total number of beads needed for your project. Round up to a full hank number. This formula works for hanks of twelve 12-inch loops. Cut beads generally come in 6-inch hanks, so be sure to double the amount when buying them.

For example, let's assume you are using size 11° beads and your project will measure six by ten inches.

$6 \times 10 = 60$  square inches (size of your work)  
 $60 \times 187 = 11,220$  beads (number of beads needed)  
 $11,220$  divided by  $4,000 = 3$  hanks,  
 rounded up to a full hank

Based on your design, now estimate the proportion of colors you are planning to use. You will need at least one hank per color. However, in the example used above, if half the beads are to be white, you will need two hanks of white.

## Bead Sizing

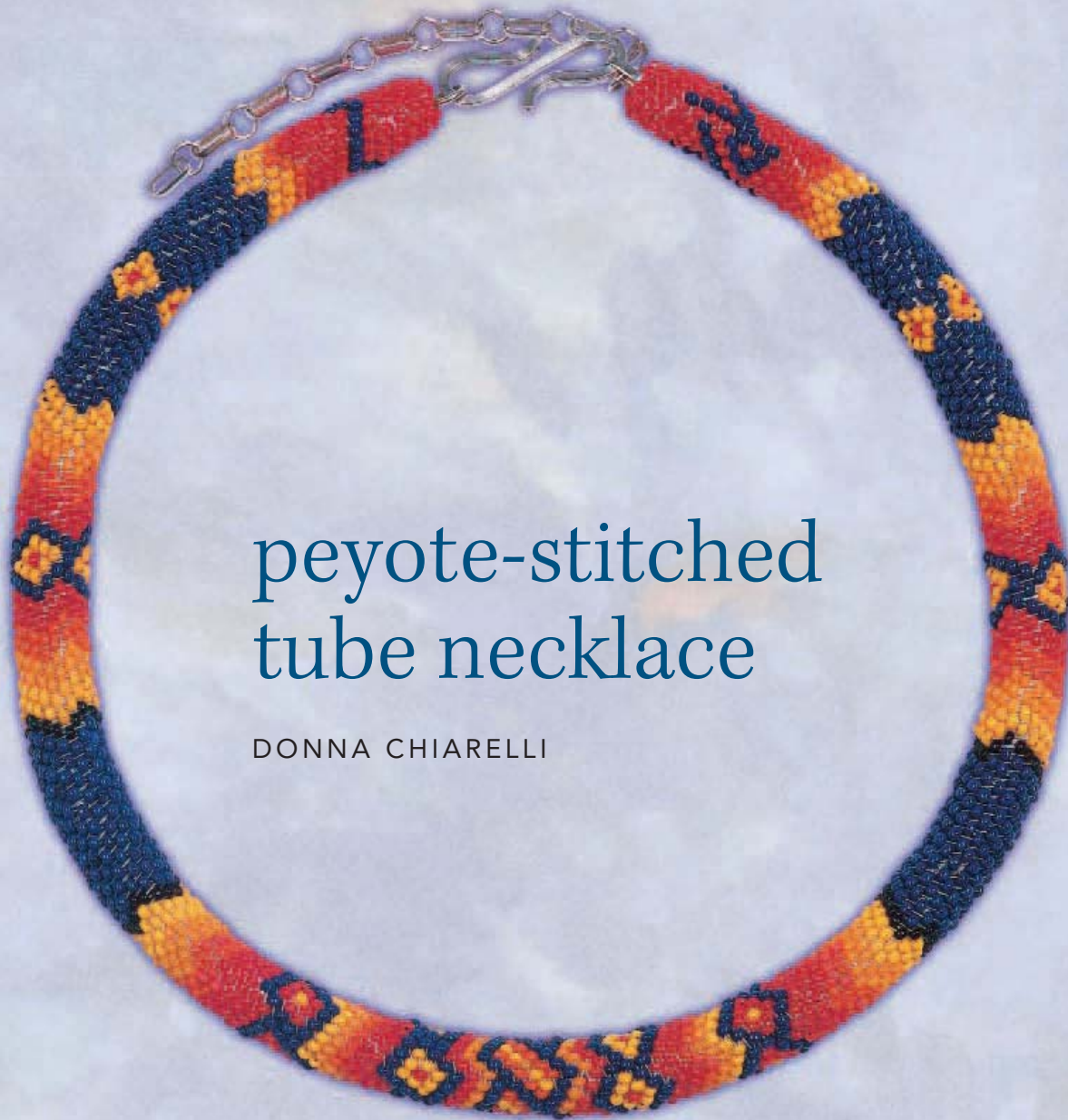
By understanding bead sizing scales, you can use different beads from different makers on the same piece of work. Use the following chart of bead sizes to compare beads from each country of production. A key point to remember is that the larger the number used for a bead, the smaller the bead.

### Bead Size Comparison Chart

Italian	3°	4°	5°	6°	
Czech	11°	12°	13°	14°	16°
French	12°	13°	14°		
Japanese	12°	13°	14°	15°	15° hex

When you use this chart, remember that it is a rough comparison. Cut beads have a tendency to be about one size smaller than the number indicates. As technology in glass making progresses, only time will tell what the next new seed bead will look like in both color and size.

*project*



# peyote-stitched tube necklace

DONNA CHIARELLI

The excitement of doing peyote stitch beadwork is twofold. First, there is a wonderful variety of colors from which to choose. Because the work is small, any color combination works, as I have learned from doing custom pieces. When I am commissioned to do a necklace, I ask the potential wearer which 2 or 3 colors s/he particularly likes. This sometimes leads to color combinations that I would not choose on my own, forcing me to try things I would not otherwise consider, thereby expanding my design capabilities. Usually the customer will name other colors that I write down as we talk. When I am ready to start, I lay out strands of the chosen colors next to each other and move them around, deciding which color will work for background and which for special accents, trying to get an idea of the overall project. The second part of the fun is finding patterns. The process itself is simple: a mesh of beads, each attached to the bead above and the bead below, sits over the rope base. Potential patterns are unlimited because the more beadwork you do, the more possibilities you will find. The necklace shown is called Solstice. I opted to work with the primary colors blue, red, and yellow, adding light and dark orange to achieve a more gradual change from yellow to red.

#### STEP 1.

Decide on 2 or 3 colors you like. There should be some contrast. If you are not sure, remember that you can use as many colors as you like for accents. The 2 or 3 main colors develop the theme.

#### STEP 2.

Determine the length you want the finished project to be and add 4" or 5" to give yourself leeway; you can trim later. Cut your rope accordingly.

#### STEP 3.

Tape the ends of the rope together to form a continuous circle. This is an easy way to keep the thread on the ends of the rope from tangling.

#### STEP 4.

Thread the needle leaving 1 side longer than the other. Do not knot it as you will be using a single thread.

#### STEP 5.

This sounds very basic, but now is the time to make sure that you have adequate light and a comfortable chair. Check your work area. I have a table with an adjustable lamp that is set aside solely for beadwork, but a large tray can be used if space is limited. I used a tray when my children were small so I could put the tray out of the way when I was not beading. Be sure to have scissors, thread, wax for the thread, and needles handy.

#### STEP 6.

Sew the thread through the rope about 4" from the connection. Do not knot it. Leave 1" or more hanging out and hold

### MATERIALS

- Rope, 5/16" - 3/8" diameter
- Beads, size 11 or 12
- Fastener, sterling silver hook and eye or wire and chain
- Thread
- Masking tape
- Jar lids or other shallow containers to hold beads
- Beeswax

### TOOLS

- Beading needles
- Scissors
- Small pliers

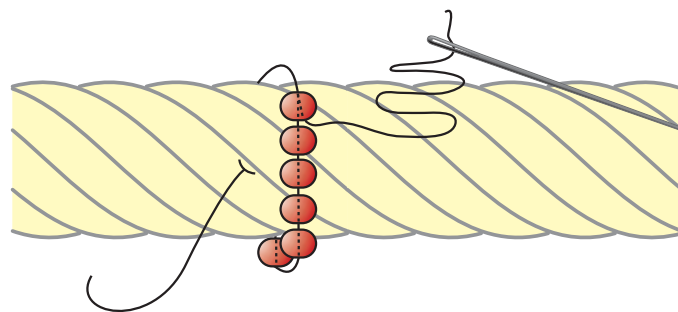
it with your thumb against the rope with the hand that will be holding the rope.

#### STEP 7.

Pick up 12 beads of a single color with your needle, pull the thread around the rope loosely, and take the needle through the first bead. You may have a little extra space on the rope but don't worry about that. When you start beading, the beads will line up in slanted rows.

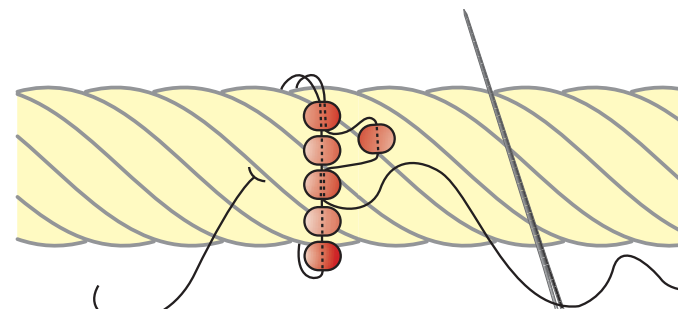
#### STEP 8.

With your needle, pick up 1 bead of the same color. Skip a bead on those around the rope and take your needle through the second bead.



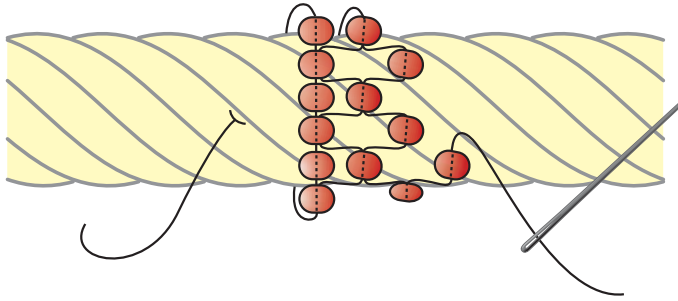
#### STEP 9.

Repeat this, skipping a bead and going through the second bead until you have added 6 beads. The beads will now lineup in 6 slanted rows of 3 beads each.

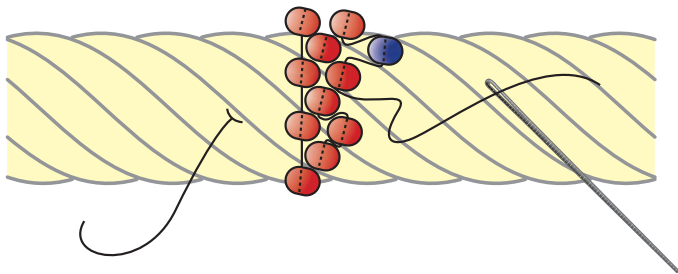


### STEP 10.

Now it will become clear where the next bead is to be added as you work around the rope. The thread will pass through each bead twice: once when you pick it up with the needle



and again when you have worked around the beadwork to add a bead below it. At no time are you sewing the beads to the rope. Remember, the beads form a mesh over the rope. At this point, congratulations are due. You have completed the hardest part (getting started). Now the fun begins. Start switching to a new color and finding your own patterns.



Remember, the possibilities are both endless and exciting — or endlessly exciting! So too are the color combinations. I base almost all of my designs on a simple zigzag pattern.

### STEP 11.

After you have beaded in a field of 1 color, pick a second color and bead it 12 beads, alternating first the new color, then the original, and then the new color again, and so on.

### STEP 12.

Now bead in 6 beads of the new (second) color.

### STEP 13.

Again bead in 12 beads, alternating the 2 colors again, starting with the second color.

### STEP 14.

Next, bead in 1 final bead of the new color to finish the zigzag pattern. Remember this important rule: you will al-

ways need an extra bead because you are working in spirals, not circles. Thus the “zig” side of your pattern will have 3 sides with 3 beads in each side, while your “zag” will have 2 sides with 5 beads and 1 with 6.

### STEP 15.

As you near the end of your thread, take your needle through the rope a couple of times and snip it off. No knot is necessary. With a newly threaded needle, go through the rope again, exiting between the last couple of rows of beadwork. With the needle and thread, but no beads, take the needle through the beads already in place, following the path of the old thread to lock the new thread in place. This knotless method keeps any binding pressure off the beads and locks the new thread in place.

### STEP 16.

As you bring the needle through the last bead in place, pick up a bead and continue beading. You can add new thread to either end of the beading you have already finished.

### STEP 17.

Before you get down to the ends, remove the maskingtape and trim the ends of the rope. If you use a standard fitting, you may want to use pliers to elongate the part that will be sewn onto the rope. Sew the fittings in well. I sew both through the rope and around it to ensure that the piece will not come undone. It looks funky, but the final beads will cover the end and snug down against the fittings. I bead in my initials as a way of signing my work.

### STEP 18.

As the beads snug down around the fittings, take the needle back through the rope and again through the last several beads of the piece. Then, take the needle back through the rope. Where it pokes out, snip it. Thus, there is no exposed thread at the end of your necklace. Over the years I have shown many people how to get started with beadwork. It always amazes me that all of these students find their own color combinations and patterns, often things I would not think of on my own. Thus, I become the student and learn from those who share my interest in beadwork.

ROBIN RENNER is a bead worker and clay artist. She received her MA from California State University in Los Angeles and also studied in Florence, Italy. Until recently, when she and her husband decided to spend some time on the road, she headed the Ceramic Department at San Juan College in Farmington, NM.

## project

*Roses montées are rhinestones with a channeled metal backing for thread to pass through in crossing directions. Take advantage of this design feature by prestringing roses montées on a bead loom and then weaving a cobblestone texture between them.*

## stones and roses

STACEY NEILSON



## Weaving

**STEP 1:** Cut five 24" lengths of thread. Tie them together with a knot 3" from one end. With the loom sitting vertically in front of you, slip these threads over the pin of the dowel furthest away from you, 2 to one side and 3 to the other. Roll the thread around this dowel twice and tighten it. String 7 roses montées on each thread and allow them to fall toward the knot, but not over the spring. Lay the threads over the springs with three coils between each one. Wrap the threads around the pin on the dowel closest to you and tie them in a knot around the pin.

**Row 1:** Using 5' of thread, tie a knot around the outermost left warp thread, leaving an 8" tail. String 2 seed beads and slide them down to the knot. Draw down 1 rose montée from each strand. Pass through each one, flipping them so that the rhinestone side is facing up (Figure 1).

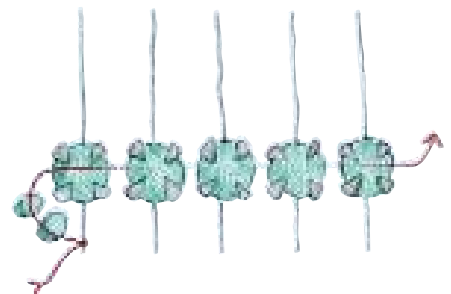


Figure 1

**Row 2:** String 2 seed beads, 1 cube, 1 seed bead, 1 cube, 1 seed bead, 1 cube, 1 seed bead, 1 cube, and 1 seed bead. Pass these beads under the warp threads and pop them up so that a cube and a seed bead are nestled between each pair of warp threads. Pass back through the beads so your working thread goes above each warp thread. Do not pass back through the first 2 seed beads—they will remain on the outside edge of the warp (Figure 2).

**Row 3:** String 1 seed bead, 1 cube, 1 seed bead, 1 cube, 1 seed bead, 1 cube, 1 seed bead, and 1 cube. Pass

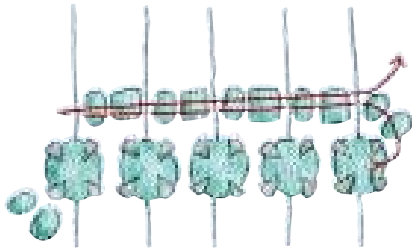


Figure 2

under the warp threads, popping each cube and seed-bead pair between the warp threads, then back through the beads.

**Rows 4–6:** Alternate Rows 2 and 3, omitting the first 2 seed beads of Row 2.

**Row 7 and on:** String 2 seed beads. Draw down 5 roses montées and pass through them, flipping the rhinestone side up as you go. Continue in this way until you've used all the roses montées. The last set of cubes and seed beads has 5 rows as in the first set. The sets in between each have 6 rows to make the bracelet 6½". If you wish to make the bracelet longer or shorter, increase or reduce the number of rows between the roses montées.

**STEP 2:** After passing through the last row of roses montées, string 2 seed beads and secure them by tying a knot around the outside warp thread below the rose montée. Pass through the first rose montée upward along the warp, then pass through the previous row and trim close to the work. Turn the loom around and repeat with the tail thread. Loosen the loom and remove the work without cutting any warp threads.

## Finishing

**STEP 3:** Using the awl to guide the thread, tie a neat knot in each warp thread as close as possible to each rose montée.

**Warp 1:** Thread a needle on an outside warp thread and pass through the eye of the insertable half of the

clasp, making sure it is the right way up. Pass back through the first rose montée and tie a knot around the warp thread (Figure 3). Wrap the

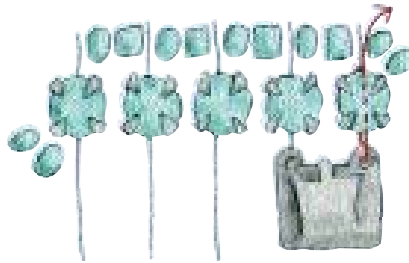


Figure 3

thread around the outside warp about 4 times until you reach the fifth row, then pass through the beads on this row. Trim the thread close to the work.

**Warp 5:** Work the same as Warp 1, attaching half of the second clasp, then passing through the fourth row of beads before trimming.

**Warps 2 and 4:** Pass through the second loop on the clasp, pass through the roses montées, and tie a knot as before. Wrap the thread around the warp thread 2 times, then pass through the third row (second row for the fourth thread).

**Warp 3:** String 1 seed bead, then pass through the rose montée and tie a knot around the warp thread. Pass through the first row of beads and trim close to the beads.

Repeat for the warp threads on the other side of the bracelet.

**STEP 4:** If you desire, add a tiny drop of jeweler's cement to some of the knots. Do so at the end of the project and leave the bracelet to dry completely before wearing.

STACEY NEILSON has been creating and designing beadwork since the early 1970s. She owns Yellow Brick Road, a busy progressive bead shop in Dublin, Ireland.

## RESOURCES

Check your local bead shop or contact: All materials: Yellow Brick Road, 8 Bachelor's Walk, City Centre, Dublin 1, Ireland; + 353 1 8730177; [www.yellowbrickroad.ie](http://www.yellowbrickroad.ie).

## MATERIALS

Size 8° seed beads  
15 g 4mm cube beads  
35 Swarovski roses montées  
1 card #6 No-Stretch nylon bead string  
2 two-strand clasps  
Jeweler's cement (optional)

## TOOLS

Bead loom  
Big Eye or twisted wire needle  
Awl or T-pin

FINISHED SIZE: 6½"





project

# Painted Desert

LISA KAN

*For this necklace, Lisa was inspired by the colors of the Southwest—turquoise, burnt orange, sienna, and tan. The interplay of color and variously shaped beads adds textural interest.*

**STEP 1:** Use 4" of 18-gauge wire to form a wrapped loop. Repeat with the remaining 4" of wire.

**STEP 2:** Attach 24" of beading wire to one of the wrapped loops using a crimp tube. String turquoise heishi and cornerless cubes randomly for 12". String 1 bead cap with the wide end toward the turquoise. String the lampworked bead and the other bead cap, facing the opposite direction. String turquoise heishi and cornerless cubes for 4". String 1 crimp tube and the other wrapped loop. Pass back through the tube and crimp. Reserve 4 cornerless cubes, then repeat entire step twice, evenly dividing the turquoise heishi and cornerless cubes between each strand and passing each wire through the bead caps and lampworked bead.

**STEP 3:** Attach 24" of wire to one of the wrapped loops using a crimp tube. String 12" of carnelian. Pass through the bead caps and lamp-

worked bead. String 4" of carnelian, 1 crimp tube, and the other wrapped loop. Pass back through the tube and crimp.

**STEP 4:** Repeat Step 3 using citrine chips.

**STEP 5:** Repeat Step 3 using turquoise chips.

**STEP 6:** Use one of the wrapped loops to string 1 cone, 1 cornerless cube, 1 turquoise rondelle, and 1 cornerless cube. Form a wrapped loop that attaches to one half of the clasp. Repeat entire step with the other half of the clasp.

#### RESOURCES

Check your local bead shop or contact:  
Lampworked bead: Lisa Kan Designs.  
Clasp: House of Gems. Turquoise heishi: Commercial Resources. Cones: Nina Designs (wholesale only). Thai silver and bead caps: You and Me Findings. Remainder gemstones and crimp tubes: The San Gabriel Bead Company.

#### MATERIALS

582 turquoise 2mm heishi beads  
162 turquoise 2–3mm chips  
168 carnelian 3×5mm rondelles  
252 citrine 3–6mm chips  
2 turquoise 5×8mm rondelles  
9×66mm lampworked bead  
45 Thai silver 2mm cornerless cubes  
2 sterling silver 7mm star bead caps  
2 sterling silver 17×20mm flattened ornate cones  
12 sterling silver 2×3mm twisted crimp tubes  
8" of sterling silver 18-gauge wire  
14×16mm sterling silver box clasp with turquoise inlay  
144" of .014 beading wire

#### TOOLS

Wire cutters  
Flat-nose pliers  
Round-nose pliers

FINISHED SIZE: 22"



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project

*A pulled-in and boom  
technique*



# ojibwe pendant

MARY THOMPSON

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The Ojibwe Pendant is a very old loom beading technique. To the best of my knowledge, it was invented by the Ojibwe people of North America. It is woven in a continuous strip, around triangles of unbeaded warp threads. The warp threads are pulled, bringing the sections together. It is a time-consuming project, and can truly try the patience, but the end result is well worth the effort.

As with any beading project, the bead weaver must first determine the desired size (bead-width) and bead colors. Try my pattern or create your own. When you're using beads smaller than size 12°, a bead-width of nine beads or more is recommended. Using fewer beads than this will create an extremely small pendant, which may break when stuffing is added, and will be difficult to fold and close.

Warp the loom using one thread for each bead plus one more thread. Cut, stretch, and wax 2 yards of "O" or "OO" Nymo, depending on bead size used.

*Note:* Great care must be taken to assure that the needle neither splits nor snags the warp threads. Remember, when the piece is finished and removed from the loom, the warp threads will be "pulled" to snug the sections together. Splitting or snagging the warp threads will prohibit pulling up and may require that the piece be dismantled and re-woven.

### Parallelogram #1

**ROW 1:** Beg weaving the first bead—the one that will be sandwiched between threads 1 and 2 (see the "Start" row in Figure 1). Bring the

needle up to the space between threads 2 and 3, and PBT the bead, making sure that the needle passes over the warp threads.

**ROW 2:** String 2 beads and sandwich them between threads 1 and 2 and 2 and 3. Bring the needle up between threads 3 and 4 and PBT the two beads just strung.

**ROWS 3–7:** String 3 beads and sandwich as in Steps 1 and 2, continuing as above until there is one bead in each available space between the loom warp threads.

### Decreasing

For the next row, string one bead LESS than the total bead width. Do not sandwich a bead between threads 1 and 2. Instead, begin with the space between threads 2 and 3. PBT all beads, and line up for the next bead row by passing the needle down through the space between threads 1 and 2 before stringing the beads for the next row.

Continue to dec one bead at a time by omitting the bottommost bead each time until the topmost bead is added between the two topmost threads. The ending shape is a parallelogram. When completed, this will be one side of the four-sided pendant.

### Parallelogram #2

The next parallelogram is a mirror image of the first one. The last bead of the first parallelogram doubles as the first bead of the second parallelogram. Inc one bead at a time until there is one bead in each available space between loom threads.

Pay attention to lining up for each row of beads. After PBT the beads in a

### MATERIALS

Size 11° or 12° seed beads  
Size "B" or "O" Nymo thread for the warp; size "O" or "OO" for the weft  
Stuffing  
Tape

### TOOLS

13" Bead loom  
Size 12° beading needle  
Scissors  
Thread Heaven

row, skip one space, and take the needle into the space between the next two loom threads.

### Decreasing

String one less bead than the total bead width. DO NOT put a bead between the two topmost threads, but rather in the next space down. Continue dec one bead at a time by omitting the topmost bead of each row until the bottommost bead is added between threads 1 and 2.

There should now be two parallelograms on the loom, with a triangle of unbeaded loom threads between them. This is half of the pendant.

### Parallelograms #3 and #4

The last bead of the second parallelogram doubles as the first bead of the third parallelogram.

Rep the instructions for parallelograms #1 and #2 to complete the parallelograms #3 and #4. They will make up the other half of the pendant.

### Pulling Warp Threads

After weaving all four parallelograms, remove the piece from the loom by

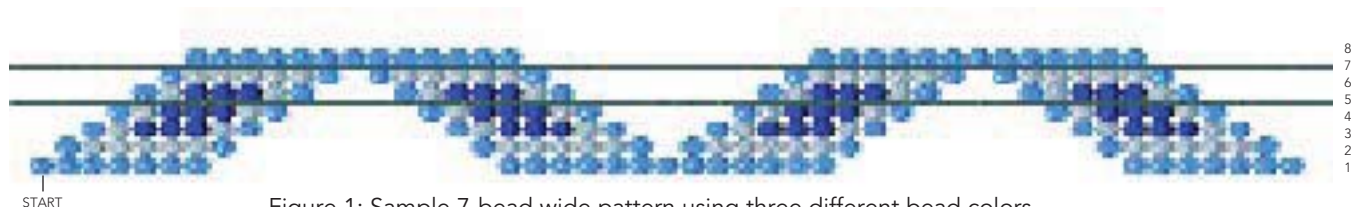


Figure 1: Sample 7-bead wide pattern using three different bead colors.

cutting the warp threads as far from the beadwork as possible.

While carefully holding parallelogram #3 between the thumb and index finger of your left hand, use your right hand to pull the warp threads to the right of the piece one at a time. (Left-handed people: Hold parallelogram #2 and pull threads to the left.) Pull the threads to close the space between parallelograms #2 and #3 first, then close the other two spaces. When pulled properly, there will be two chevron shapes in place of the four parallelograms (see Figure 2).



Figure 2: Side-by-side chevrons.

Tie off the warp threads two at a time, keeping the knot close to the beadwork. After all knots are tied, tape (in order to contain the unruly threads when stuffing the pendant) and trim the rem warp thread.

### Forming the Pendant

Fold the loomworked piece in half (one chevron on top of the other, with the taped edges lined up). With

a new length of thread, PT the longest row of beads from the inner “V” of the chevron. Exit at the corner where the two chevrons join. Pull the tail of the thread all the way into the row of beads to hide it.

Whip stitch the chevrons together along this edge. Reinforce the edge by taking two to three whip stitches at the start and finish off the seam. This will be the bottom edge of the pendant.

At the outer edge of the chevron (where the bottom whip-stitching ends), PT the longest row of beads. The needle will now be at the inner “V” of the chevron, opposite the bead you PT when you began this procedure.

With the taped ends to the right, and the stitched pendant bottom pointed down, note the two upper points of the “V”. Push these two points together. When you do this properly, you’ll make a pouch, and the needle and thread will be lined up while you whip stitch the top edge.

Fold the taped ends inside the pendant, trimming as necessary. You will sew this edge after you stuff the pendant.

### Stuffing

The pendant is now a little pouch, awaiting stuffing. Cotton balls are not recommended because individual fibers tend to work their way out between the beads, giving the piece a decidedly fuzzy look. A small piece of fabric that matches the main bead color works well. Try using a long,

thin strip rather than a square, and gently stuff through the opening left between the taped ends. Do not overstuff. The length of the fabric strip is based on the size of the pendant and the desired shape of the end product. After stuffing, PT the longest row of beads, which will line up with the bottom of the taped ends. Close the opening by weaving left- and right-edge beads together in pairs. Add a loop of beads at the top and fringe as desired.

MARY THOMPSON has been bead weaving for over 25 years. She has been teaching beadwork for the last 10 years, and currently teaches at the Stewart Indian School Museum in Carson City, Nevada. She and her husband live in a log home in Virginia City, Nevada.

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