

Knotted Knight

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- significant portions of this handout were adapted from earlier versions of the class, written by Mick McNulty and Kim McKinlay

Sometimes the most flattering way to display a strand of beads – pearls, vintage Swarovski, you name it – is the simplest way: by knotting them into a necklace. Or maybe you've got your grandmother's necklace sitting in your jewelry box and you'd really like to wear it, but it's broken or bedraggled. You're in luck. This class will teach you everything you need to know to combine your beads, some silk or nylon thread and a couple of findings to create a classic – or cutting-edge – or comforting – necklace or bracelet that will get rave reviews. We'll cover the situations in which knotting is appropriate; how to select the most appropriate stringing material for your beads; how to make precise & consistent knots along the strand; and how to finish the necklace with bead tips and a clasp. I'll also demonstrate the "endless rope" technique for lucky people with lots and lots of beads to use.



Supplies

- enough beads for the length of the design you're creating
- *knotting cord* of the appropriate weight and material for the beads you're using
- *bead tips* to provide a clean, secure link between the knotted beads and the clasp
- a clasp.
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(Words in *italics* are discussed below.) If you've already got beads you want to work with, the class will cover how to pick the right knotting cord. If you don't already have beads and don't want to buy any, we've got practice beads and cord you can use.

Nomadic Notions will provide the necessary tools: sharp-tipped tweezers, thread snippers, and needle nose & round nose pliers for use in class. We'll also have GS HypoCement, the glue of choice for securing the end knots of your beaded strand.

Remember, on the day of class you get 20% off all purchases you make at the store, whether or not they're used in class (except for merchandise that's already on sale). Grab that special strand of pearls or vintage beads and let's knot!

Why Knot?

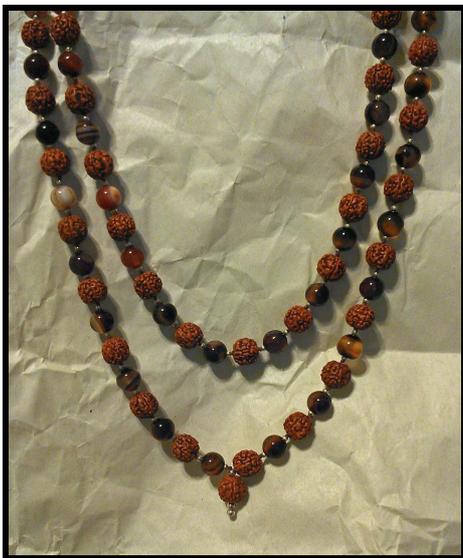
When most people thinking of bead knotting, they immediately think of pearls. Pearls are classic, delicate beads – if they rub against each other they can lose their glow; they can crack if they're dropped, etc. And until the relatively recent advent of inexpensive dyed freshwater pearls, genuine pearls are rare and expensive. Tying a knot between each pearl as you add it to a strand prevents bead-to-bead friction, which protects the finish, and it limits the damage if your necklace breaks – instead of pearls flying everywhere, each one is secured to the cord so you'll usually only drop one or two.

But knotting isn't just for pearls. That little gap between beads created by the knot puts more visual emphasis on the beauty of each individual bead, so it's great for vintage beads, expensive gemstones where you want to maximize the impact you get from each bead; and for semi-precious stones with strong patterning. In a knotted necklace each bead gets a chance to tell a little bit of the story.

Knotting on silk or nylon creates a much more fluid, drapery piece than using Beadalon (braided stainless steel coated in nylon), which you might prefer if you're using very small beads, or if you're making a long strand that you want to wear knotted or tied.

If you're worried about not having quite enough beads for your project, knotting is a subtle & sophisticated way to stretch your dollar. Depending on the weight of the cord you're using, and the size of your beads, knotting can add just the bit of length you need, anywhere from 1 to 2 inches for necklaces shorter than 22". That might not sound like a lot, but if you're using expensive pearls or gemstones that are sold in 8" strands, it's a big difference!

Sometimes, if you're making a necklace with a lot of personal meaning, knots indicate an attention to detail that emphasises the significance *to you*. After my mom died, I found this vintage locket on eBay, cleaned it up, and knotted into a strand of a load of 2mm garnets. It drapes beautifully, the garnets are Mom's birthstone, and the process of knotting was sort of like spending time with her.



Many religious traditions use knotted beads as aids for prayer or meditation. These can be made without any beads at all, just by spacing the knots along the cord – but what fun would that be?

Why Not Knot?

There are a couple of situations in which I personally don't like knotting. First, bracelets. No matter how good a job I do with my knotting and finishing, I'm still using a string – a strong string, but a string nonetheless – to hold beads that I like around my wrist. I am **very** hard on my bracelets, so I stick to Beadalon (that braided steel wire) or wire. If you're less of a klutz than I am, beaded bracelets can be gorgeous.

If you are using very heavy beads, such as large (more than 8mm diameter) Swarovski crystals, or some gemstones like sapphires and rubies, you may find that the beads themselves cut your thread. Choosing a heavy enough knotting cord can prevent a lot of this, as will using the correct findings to finish your work.

Selecting the Best Cord

Almost any sort of thread *can* be used for knotting, but in practice there are two primary choices: silk and polyamid (or nylon). These cords are sold with a needle already attached, so you don't have to worry about threading anything – a huge benefit.

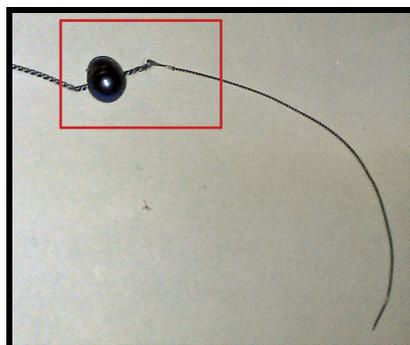
Silk is the traditional choice for fragile beads such as pearls, amber, and jet (also known as lignite – fossilized wood that formed under extreme pressure – shiny charcoal with a big ego!). Colors available in silk tend to be a bit muted compared to their synthetic counterparts. Silk will stretch as it ages, so store your silk-knotted pieces in jewelry boxes or drawers, rather than hanging them.

Polyamid is somewhat stronger than silk of the same diameter, and is more water resistant (although really, you shouldn't be wearing your gorgeous hand knotted necklace at the swimming pool no matter what you've used to string it). Its colors are brighter than the same colors in silk. Polyamid does not stretch as much as silk does, but given enough time it *will* stretch somewhat, so again, don't store polyamid-knotted necklaces by hanging them!

Note: If you're learning how to knot because you've got family heirlooms, vintage strands or knotted necklaces of dubious origins, be aware that the cord on those older pieces has stretched! **This means that no matter what type of cord you use, your restrung necklace will be shorter than it was when you started.** If you want to end up with the same length when you're done, you may have to add additional beads, use a larger clasp, or add an extender chain.

Nomadic Notions carries Griffin knotting thread in both silk and nylon. Knotting cord is classified by its diameter, with size 0 being the thinnest/lightest and size 16 being the largest I've ever seen. We carry even sizes 2-8 in all available colors, and size 10 in black, white and grey.

What size? The only way to be certain you've got the right diameter of thread for your project is to thread a few of your beads on it.



In this stunning photograph, I've threaded one of my freshwater pearls onto size 4 silk. The box outlined in red is key. The point where needle meets thread is ever so slightly

larger than either the needle or the thread by themselves. If your beads have to be pushed over this spot, but are okay once they're on the thread, *you need the next smallest diameter of cord*. Each time you force a bead over the end of the needle, you fray the knotting cord. When it breaks – and it will – you'll be forced to start with a completely new threaded needle. The proper size of Griffin knotting cord, used with the supplied needle, will be too big to use with a regular beading needle, and the cord isn't stiff enough to get through the beads on its own.

You need a larger diameter cord if your beads slide over the knots you make in the cord you're testing.

As a *very* general rule of thumb, pearls, garnets, and high end gemstones have the smallest holes. They're difficult to drill, and their value is in part determined by how much they weigh. The people doing the drilling want to leave as much of the good stuff as they can. These will usually take a size 2 or 4 thread. More durable semi-precious stones can range from size 2 to 6; insofar as I have one, my "go-to" cord is size 4. Glass and crystal beads, being manmade, generally have larger holes and will require size 6 or larger.

If you fall in love with knotting, and foresee doing a lot of it, you may want to get a sample of each size of cord, for testing beads at home. Or be sure you carry a few of each size of bead you are using in your projects when you go hunting for cord. If all else fails, you can buy the same color in a couple of different sizes. The cord you don't use today will get used at some point...

Bead Tips

The last bit of hardware we need to discuss is the bit that connects the knotted cord to the clasp. This assumes, of course, that there *is* a bit of hardware used for this purpose. A lot of the repairs we get at the store are relatively expensive knotted necklaces that end by tying the knotting cord directly to the clasp. **This is a really bad idea**. The necklace moves while it's being worn, and that gentle movement is more than enough for the metal clasp to cut through the cord.

To prevent this, we use what are called *bead tips* (or *clamshells*).



These are the most secure style of bead tips, and you'll learn how to use them in class. The "half shells" close over the knotted end of the thread, hiding it from view, giving the piece a clean, professional look. They also close over the end of the metal loop, after the loop's gone through the connector on your clasp. It's very hard to pull these apart once they're assembled without using tools of some sort – they won't just "fall off."

You may also run across this style of bead tip. They are definitely better than no bead tip at all, but they are nowhere near as sturdy as the ones above. The knot sits inside the half shell. Then you hook the clasp into the loop, and bend the loop so that it meets the edge of the half shell. There's nothing holding the loop in place except maybe glue, so if you have to use these, be careful not to make your necklace too heavy.



Tying It On

The key skill for creating gorgeous knotted necklaces is the ability to make firm, consistent, well-placed knots all along the length of your work. The method we're teaching tonight uses tweezers to position and tighten the knots, and the "overhand" style of knotting. I've provided both left-handed and right-handed photographs of the actual knotting part, in hopes of avoiding having to say "non-dominant hand" a hundred times during the evening.

No matter what your dominant hand is, you start the same way. Take your cord completely off the card, and tie a knot in the end. Don't think about this part too much. If you're using size 2 or 4 thread, you may want to make a double knot so it won't slide through the hole in the bead tip.



To begin, thread your needle through the hole in one bead tip, so the loop is on the same side as the knot. The needle should be moving away from the loop.

If it helps, think of the bead tip as a Pacman getting ready to snarf the knot. Tug on your cord to be sure that your knot won't slip through the hole.

The next step is somewhat a matter of taste. I prefer to add a knot after my bead tip, before I put on my first bead, because I think it looks nicer and because it keeps the bead from rubbing against the metal. Some of my co-workers disagree. In any event, whether you've put on a bead or not, your next step is to tie a snug knot right next to whatever you've got on the cord.

Important note: Be patient with yourself! Like every new skill, you've got to do this a while before you develop muscle memory and start to feel like it's natural. The woman from whom I learned this technique said you needed to tie at least 100 knots before they would begin to be consistent in placement and tension. Focus on how you hold the cord, position the tweezers, and manipulate the two into a knot for now. Consistency will come with practice.

Lefties



Hold your right hand vertically in front of you (as if you're making shadow animals).

Drape the cord so that the end with the bead tip (or beads) is hanging in front of your palm, with the remaining cord behind your fingers.

Wrap the long end of the cord around your fingers once. At this point, the cord should not be crossing itself.

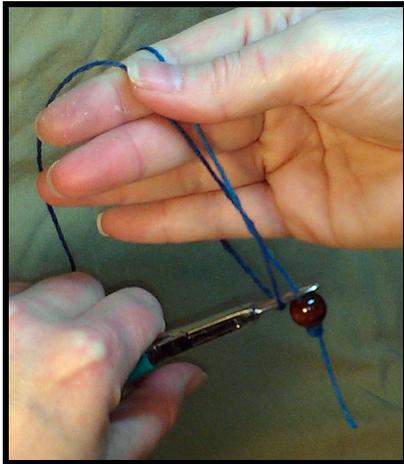
[Yeah, this all feels completely awkward, but you'll be pleasantly surprised at how quickly you get used to it with a little practice.]



Bring the short (bead) end of the cord **OVER** the long end, crossing from right to left, in the direction your fingers are pointing. Then tuck the short end **UNDER** the string it's just crossed....

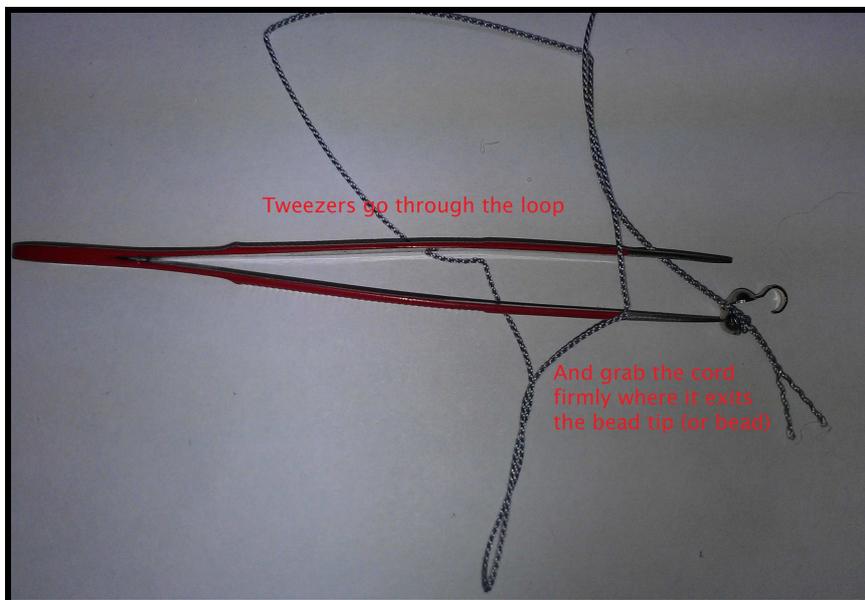
...and pull it back through, so you've made a loop with the thread crossing at one point.





Now, grab your tweezers with your left hand. Go **THROUGH** the loop you've just created, and grab the cord just at the point where it's coming out of the bead.

If the tweezers are pointing toward your arm, you're going in the right.



This part is pretty important, so here's another image. You want to be sure that you don't accidentally catch any of the loop with your tweezers, and that you've positioned the tweezers as close to the bead (or bead tip) as you can.



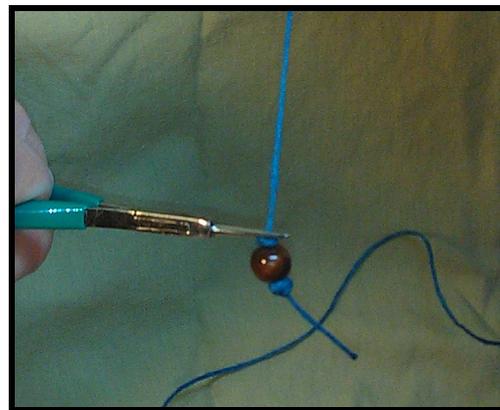
While your left hand continues to grip the cord in the correct position, slowly and gently drop the cord loop out of your right hand, catching the long tail of the cord as you do.

In this picture, my right hand is above the top of the frame, holding the long end of the cord vertical.

Again, slowly and gently pull on the long tail with your right hand to begin closing the loop.

When the loop gets to be about the same diameter as the bead, or a little smaller, let it drop over the ends of your tweezers by tugging the cord forward with your right hand. Snug up the long end to remove the remaining slack in the loop of the knot.

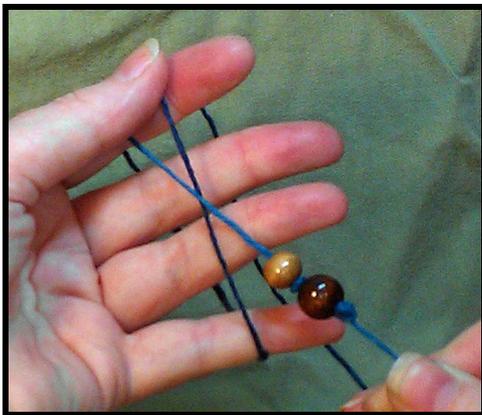
Finally, tighten the knot by continuing to tug gently on the cord with your right hand. Hold your tweezers with enough pressure that the knot can't get away, but *don't* squeeze the cord! If you do, you will shred the cord sooner or later, and then you've got to start over.



Righties

Hold your left hand vertically in front of you (as if you're making shadow animals). Drape the cord so that the end with the bead tip (or beads) is hanging in front of your palm, with the remaining cord behind your fingers. (This is shown in the photo below – I managed not to have my photographer get this first step for the right side.)

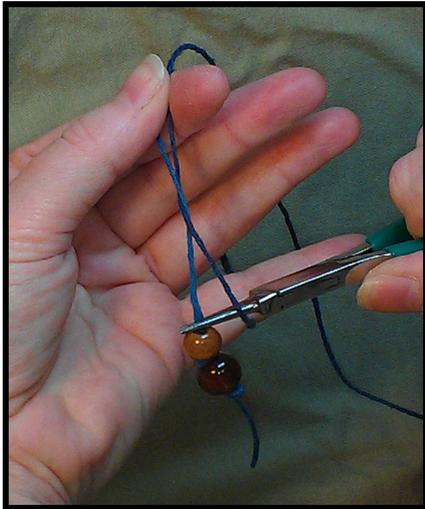
Wrap the long end of the cord around your fingers once. At this point, the cord should not be crossing itself.



Bring the short (bead) end of the cord **OVER** the long end, crossing from left to right, in the direction your fingers are pointing. Then tuck the short end **UNDER** the string it's just crossed....

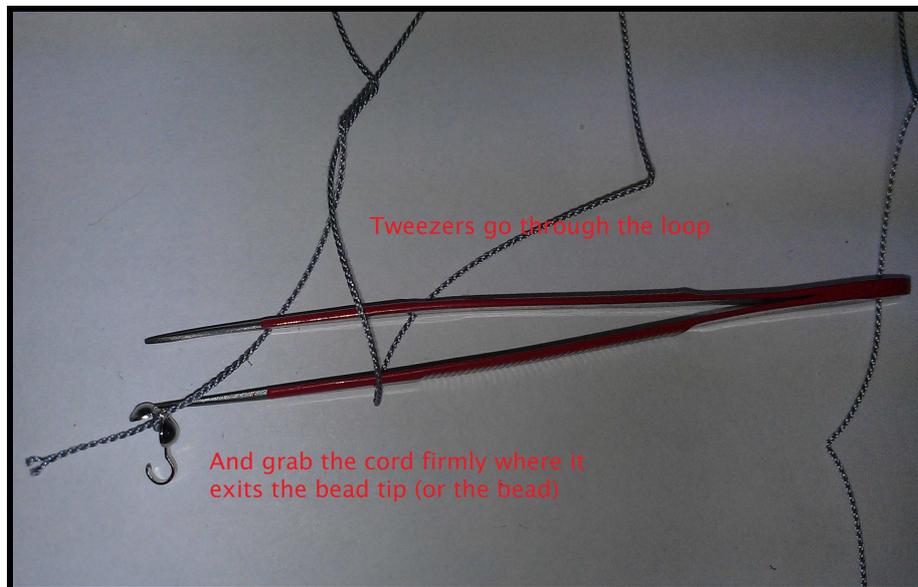
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If the tweezers are pointing toward your arm, you're going in the right.



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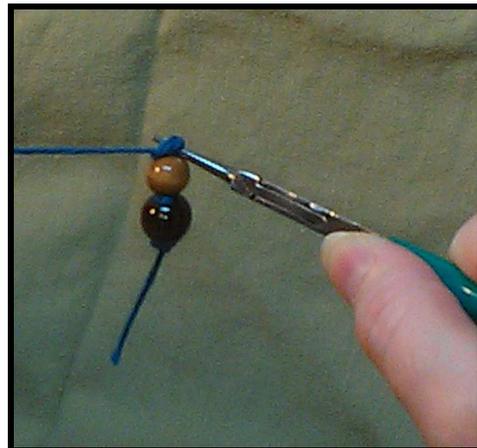


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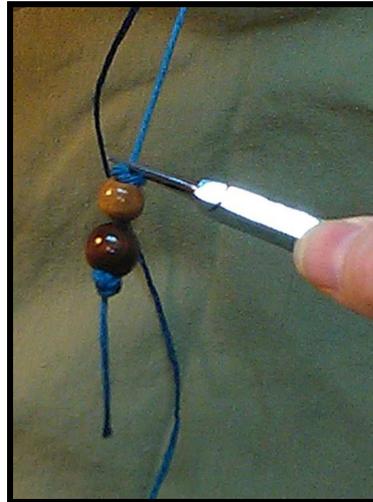
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Again, slowly and gently pull on the long tail with your left hand to begin closing the loop.

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Finally, tighten the knot by continuing to tug gently on the cord with your right hand. Hold your tweezers with enough pressure that the knot can't get away, but *don't* squeeze the cord! If you do, you will shred the cord sooner or later, and then you've got to start over.



All Together Now

Slide on your next bead, tie another knot, and continue until you're at your desired length. Once you're there, you can either tie a final knot before adding the bead tip, or not, depending on your preferences.



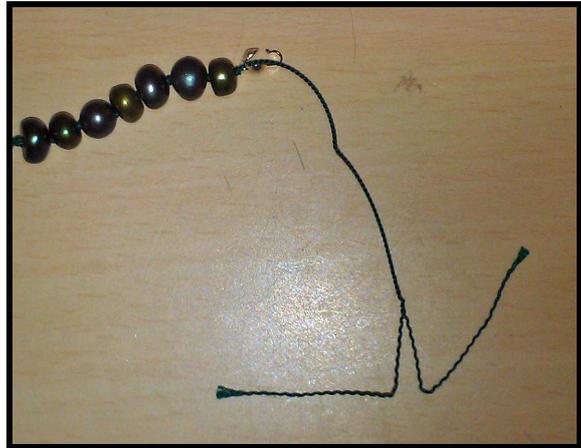
Slide on your closing bead tip. This time, you're going from the "outside" in – the needle starts from the back the bead tip and goes toward the metal loop. Let the tip drop to your final bead or knot.

I'm sincerely hoping that we don't need to visualize the Pacman "eliminating" the knot to go in the correct direction...

In the old days (last year), I used to use the same tweezer method to get my final knot tied right down inside the middle of the bead tip. No matter how much I practiced, this pretty much remained tremendously annoying. Then our manager Ashlea showed me a sneaky, easy, never-fail (okay, maybe *rarely fail*) to tie that final knot.

Cut off the needle end of your knotting cord, leaving yourself 3-4 inches of cord (this can be shorter when you have more practice).

If you look at the cut end of the cord, you'll see that it consists of *two* pieces of thread that have been twisted, or *plied*, around each other.



Grab one thread in each hand, and untwist them. Go slowly. It's a back-and-forth thing: untwist, let the threads twist back up, let the necklace twirl...those threads are twisted very tightly, so it takes a little while to undo it all.



Once the threads are good and unkinked, tie a double knot. Again, go slowly – you want to be sure that as you snug the knot up, you're getting it right down in the center of the bead tip – if you haul on it too quickly you can wrap the threads back around each other and end up with a knot that's entirely outside the bead tip.

Once your second bead tip is firmly in place, soak the knots on both ends of your necklace with Hypocement to provide additional protection against unravelling. Once it's dry, trim the threads as close to the knot as you can get without cutting the knot



All that remains is to attach your necklace or bracelet to its clasp. Slide one bead tip's loop through the connector on half of the clasp. Using your round nose pliers, roll the loop towards the center of the bead tip, so the end of the loop will be inside the "clamshell" when it's closed.



Using your chain nose pliers, gently squeeze the two halves of the clamshell together, being sure to catch the end of the loop inside, and using your tweezers or a pin to push any escaping bits of thread back in.

Repeat this process for the other end of your necklace, and you're good to go!

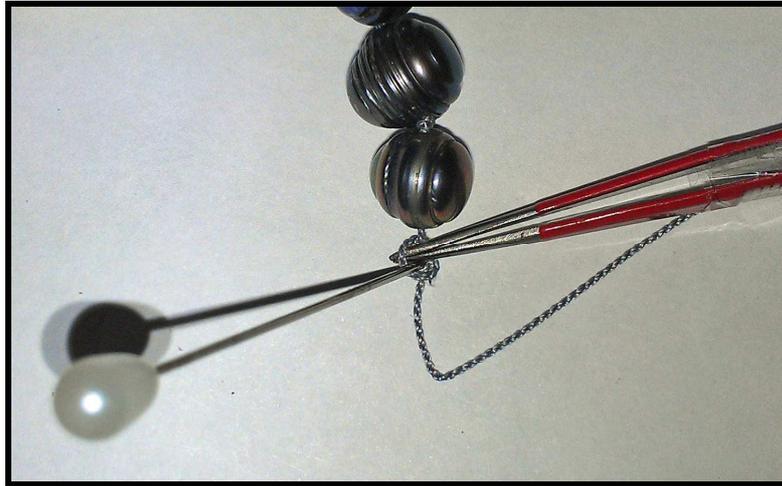
Accidents Will Happen

Like everything else in the world, things can get messed up with bead knotting. Here are some troubleshooting tips:

“My knot's too far away from my bead; or, while I wasn't looking, space aliens tied a knot in my cord right next to the needle so I can't get any beads on.”

For some reason, my immediate instinct when I notice my knot's going in the wrong place is to tense my entire self up and make the knot tighter. **Don't do this!!!** If

you see you've got a knot problem, lay your beads and cord down on your work surface. By doing this, you lower the chances that the weight of the beads will make the knots or tangles tighter. This is one place your emergency toolkit *ahem* will come in handy. Using your corsage pin (and your tweezers, if you need them), gently pry into the knot until you can loosen up where it's tightened, and then use your hands to pull it apart.



“One of the 78 beads I need to use for the necklace has holes that are too small to fit over my needle, even though the other 77 are fine.”

Alas, beads are drilled by humans, who may or may not be using machines, and that means that bead holes are not always as uniform as we'd like. There is a specific tool called a *reamer* that's like a very narrow drill. If you're careful, you can use the reamer to enlarge the bead hole. Dipping the tip of the reamer in water may protect more delicate beads as you work (and keep the amount of “bead dust” under some kind of control.)

Some luck is also involved, because every once in a while you'll find a bead that is drilled so badly that no amount of reaming can fix. Unfortunately, there's not a good way to prevent this kind of problem without testing each and every bead on your thread first...

“I really love these wooden beads, but they've got big holes, and I'm working with these tiny pearls and their small holes. Help!”

If you're willing to compromise, this is a pretty easy problem to solve. Pick out a small bead – size 8/0, 10/0 and 11/0 seed beads are pretty reliable, and I'm also a big fan of our 2mm sterling silver rounds – that works with your design. It needs to be large enough that it won't fit inside the holes of the big beads, and small enough that the smaller knot will still hold it in place.



You can see the bright yellow crystals I've used to hold the big blue floral beads in place. The knots are between the yellow crystals and the topaz & turquoise rondelles.

And everyone's favorite: **"Help! My cord broke!"**

Unfortunately, in many cases this isn't something you can fix; you have to start the entire process over. However, if there's a little space left over in the holes of your beads after they've been knotted, you may be able to cheat. Knot the end of your remaining cord (the part with the needle attached), and make sure that the wire needle is relatively straight. If you can get the needle through the *last* bead before your thread broke, you'll have two knots at that spot, **but** you will not have to repeat beading everything you've already done.

I've managed to do this with crystals – the size 10 cord is large enough for knots to hold 8mm round crystals in place, but leaves some extra room in the holes – and once, with my flat grey pearls (on the cover of this handout). With the flat pearls, I used my bead reamer to make the hole in the last bead ever so slightly larger, so I could push the thread through and keep going. Since these are "baroque" pearls – irregular in shape and color – the extra knot is nearly invisible.

Endless Ropes

If you have enough beads to make a strand that will fit over the head, and they have holes that will allow you to pass your needle and cord through them twice, as discussed in "My cord broke!", you can finish your necklace without having to add the clasp.

When you're at the length you want, just pass the needle and thread back through the first knot and bead on your cord, and tie another knot. Voila!

