

# Beginning Inkle Weaving

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## I. Introduction

Welcome to beginning inkle weaving. I will guide you through the process of basic plain-weave inkle weaving, starting with the design process and ending with simple finishing techniques. My directions and illustrations apply to the table style of inkle loom, but we can also address your custom or floor loom in class. I will not go into the history of inkle weaving here, but here are a few excellent resources that I highly recommend, both for historical research and technique:

[Inkle](#), Evelyn Neher. Self-published, Guilford, Connecticut, 1974.

[Inkle Weaving](#), Helene Bress. Flower Valley Press, Rockville, Maryland, 1990. Originally published by Charles Scribner's Sons, 1975.

[Byways in Handweaving](#), Mary Atwater. New York, 1954.

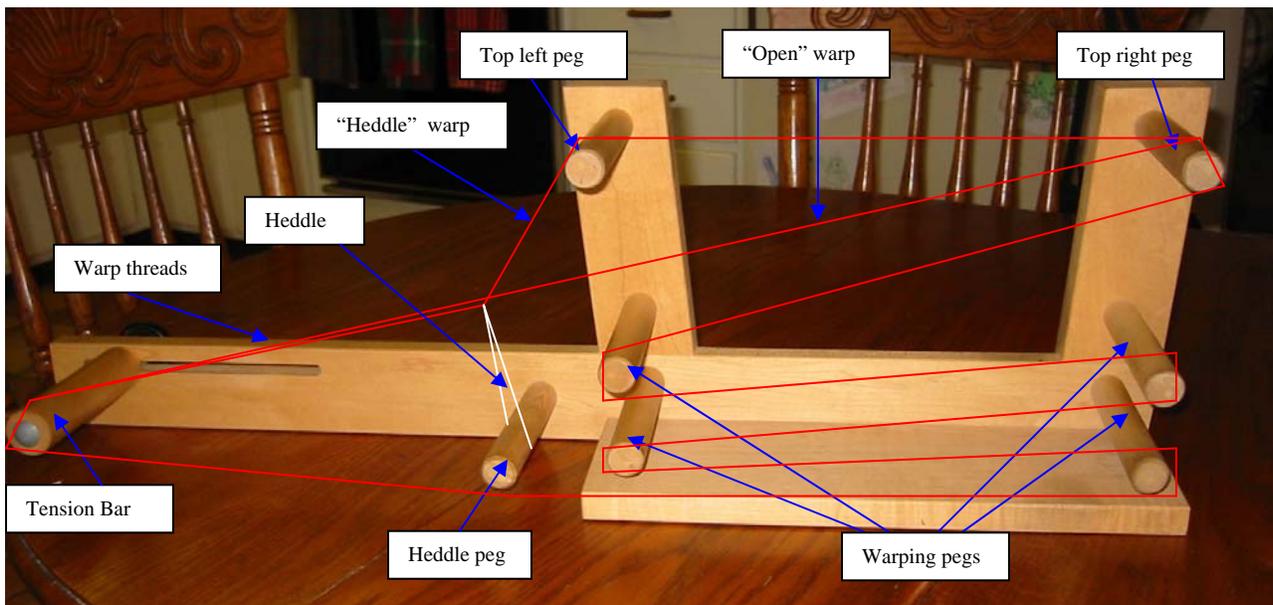
[www.inkleweaving.com](http://www.inkleweaving.com) Tracy DeGarmo's inkle weaving website.

[www.weavershand.com](http://www.weavershand.com) Incredible resource on a variety of narrow-wares, including inkle weaving. Decent bibliography for inkle weaving as well, for those interested in further research.

[www.heatherspages.net](http://www.heatherspages.net) My website, with these directions and a photo gallery of directions, among other things. You can contact me through the site, as well.

## II. Terminology

Inkle weaving produces a type of weave that belongs to the “bound weave” category of fabrics. Specifically, inkle weaving typically produces what is known as “warp-faced” bands. That is, only the warp threads, the length-wise threads, show in the final woven piece. The weft, or horizontal-wise threads, are completely hidden by the warp, except at the very edges. See the picture below for some additional terms that I refer to throughout these directions. The red lines show the path your warp threads will take on your loom, with one thread passing through a white heddle.



### III. Design

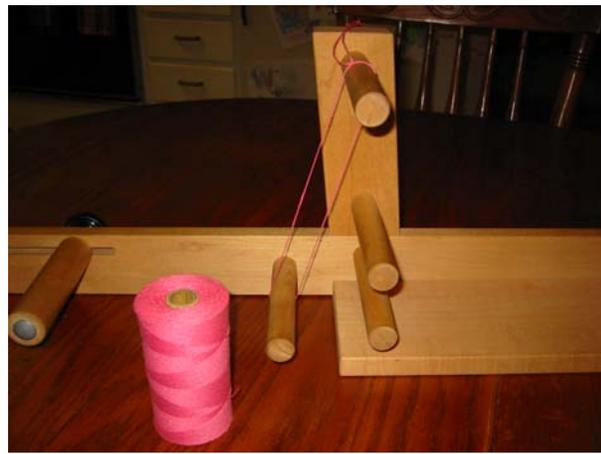
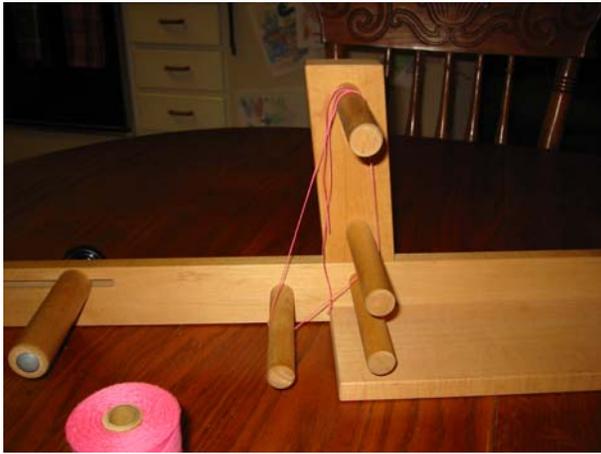
I keep an engineering notebook for all my inkle projects. This kind of notebook has regular ruled paper on one side, and graph paper on the other. This is really handy for keeping design info. For each project, I note the date I started, what materials I plan to use, colors, and any other relevant info. Later, after I finish the project, I usually print a color picture of the finished piece and tape that in as well. On the graph paper side, I use colored pencils to chart out my design.

I usually start my design by browsing through my yarn stash, and grabbing whatever catches my eye. This is generally just based on color choice, and a bit on texture. I then select colored pencils to match the colors I chose, and start graphing possible woven designs. In plain inkle weaving, there are only two possible arrangements of your warp threads, up or down. In weaving terminology, this is referred to as having two “sheds,” the space in the warp where you will pass your shuttle back and forth. What that means when you are designing is that you only have two rows to color. Go ahead and color in two rows of squares in colors you have selected, each square representing a thread of your warp. Mark one row with an “H” to signify a “heddle” warp, and the other row with an “O” to signify an “open warp,” which we will talk about more later. When you are done, color in some repeats of those two rows to get a bigger view of what your finished weave will look like. The graph paper rows stack up just how your weaving will be produced. For this first piece, I recommend using no more than three colors, and designing your rows to be no more than around 25 threads wide. For now, make sure you have a border on both edges in the same color. This will end up being the color of your weft later. Here’s a sample graph from my project notebook. The red arrow indicates how the draft is “read,” by starting at the lower left square, then up a square, then down to the bottom of the next column, then up again, and so on. This tells you in what order you will wind your warp threads on.



### IV. Preparing to weave

- a. **Heddles** – Before we can start winding the warp onto your loom, we need to prepare some heddles to have ready to hand for that process. When we wind on the warp, every other warp thread will pass through a heddle. If you designed a draft that was 25 columns wide, you will need 25 heddles ready.



The first picture shows you the three pegs to tie around for a full length “folded” heddle on a standard table loom. Tie a length of your heddle fiber around these three pegs and knot securely. It’s important that this knot doesn’t slip out. The second picture shows the two pegs I tie around for a slightly shorter heddle. I prefer the shorter heddle for use in other techniques, such as pick up work. Either size is fine, but it’s a good idea to have them all be the same, so pick one or the other.

- b. **Warping** – Once you have enough heddles, you’re ready to start winding on the warp. Look at your draft, and find the lower left corner square. That color is the color we will start with. Adjust your tension bar about  $\frac{3}{4}$ ” back from fully extended. This will give you a little more tightening room after we’re done winding on the warp. Turn the loom so you are facing the pegs. Take your warp thread, and, leaving about 12” for a tail, tie it in a single overhand tie to the tension bar, close to the back of the loom, that is, up against the frame. You need to be able to untie this with one hand when you’re done warping. Then, take the tail and wrap it around the tension knob to keep your single tie from slipping. Now, if you look at your draft, your lower left square should be in an “H” row, that is, it passes through a heddle. Go ahead and slip one of your heddles onto the heddle peg and lay it over the back of the loom. Bring your warp thread in front of the heddle and pass over the top left peg with your right hand. With your left hand, pick up the loose end of the heddle from behind your warp thread and fold it forward over the warp thread, slipping this end over the heddle peg. Now, keeping the tension on, pass the warp thread over and around the top right peg, and so on around the warping pegs until you come back around the tension bar again. This next warp thread, looking at your draft, is in an “O” row, that is, it’s “open” or doesn’t pass through a heddle. Bring the warp thread between the top left peg and the middle left peg, then over and around the top right peg again, then follow the same path you took with the first warp thread, until you come back around the tension bar. Continue in this manner, heddle warp, then open warp, until it’s time for a color change. When it’s time to change colors, cut off the last warp thread after you come around the tension bar, leaving two or three inches extra on the end. Line up your next color to this tail, and tie them together in a simple overhand knot, trying to keep the knot over the tension bar. Once the new color is tied on, go ahead and clip the tail. (When I try to do them all later, I almost always accidentally cut a warp thread.) Continue to wind on your warp as before with the new color. Work all the way through the draft, changing colors when indicated by your pattern. Remember to try to keep the warp thread you are working with under constant tension, even when

you are changing colors. Even tension throughout makes for a nicer weave later. When you get to the last warp thread, bring it under and around the tension bar, and clip as if changing colors again. Turn the loom so you are facing it from the front, and while holding that last warp thread in your right hand, unwrap the first warp thread from the tension knob with your left, and undo that tie. Make sure that the first warp thread passes over the TOP of the tension bar. Bring the last warp thread over to the first from underneath (it will be on a diagonal under the warp) and tie it to the first warp thread in a secure square knot. Try to line this knot up with the others. Clip the ends so they are even with the others. Almost ready to weave!

- c. **The shuttle** – Now it's time to fill up your shuttle. In inkle weaving, the shuttle usually doubles as the “beater” and is ideally tapered along one edge. Using thread that matches the borders of your warp design, begin to wind onto your shuttle in the obvious manner, around the center between the two slots. When it starts to fatten up around the center, distribute some of the bulk by also winding in an “X” around the un-tapered edge of the shuttle. Keep going, shifting from the center to the edge as needed to keep the bulk as evenly distributed as you can, until you think you have enough weft wound on to make it through this project. Too much is better than too little! You can always use the extra weft for lucet work later.



## V. Weaving

- a. **Advancing the warp** - Turn the loom lengthwise so you are facing it from the front, with the tension bar directly in front of you. First we will advance the warp so the knots where you changed warp colors are on the bottom. You will start weaving right up against the tension bar, so advancing the warp will also give you room for a fringe at this end of the finished weaving later. Loosen the tension knob and allow it to slide away from you a bit, maybe an inch or so. Grasp the warp threads firmly with your right hand, and pull them gently and slowly forward, sliding the whole warp forward around the pegs. Keep an eye on the back pegs, making sure that none of the warp threads slide off the ends of the warping pegs. The warp will tend to spread out on the pegs whenever you advance. Continue to pull until the warp knots are about one inch away from the heddle peg on the bottom, or further if you want the finished fringe to be longer. Snug up any warp strands that have spread out along the pegs now, this is much easier to do when the warp is not under tension. Pull the tension bar firmly forward again and tighten down the knob to put the warp back under tension again. To brace the loom for this, you can either brace the tension bar against your chest as you pull forward on the bar with your hands, or, you can swing the

loom down to the floor and brace the back pegs with your feet while you pull up on the tension bar. As you weave for extended lengths of time, you'll find that you reposition yourself for bracing and weaving often. For these cotton fibers, you'll want the warp to be pretty snug. Remember the adage about bouncing a quarter on a well-made bed? About that snug. Different fibers will work better with different tensions, as you'll find when you encounter them in your weaving. Now, look at your warp from the side again. Notice how the heddles moved forward with warp. Facing the loom from the front again, simply push them back as far as they will go with your thumbs or your hands, to give you plenty of weaving room. Whenever you advance the warp, you should beat back the heddles before you begin to weave again.

- b. **1<sup>st</sup> shot** – Now we will begin to weave. Reaching behind the first column of pegs with your right hand, pull up on the open warp threads. The space thus created between the two layers of warp threads is called the “shed.” While keeping this shed open, pass your shuttle through this space, right to left, leaving a strand of your weft thread laid in at angle tilting away from you, um, up at the left edge. Each pass of the weft across the warp threads is called a “shot.”
- c. **Change sheds** – Now, push down on the open warp threads, creating a new shed. This switching the open warps up and down is called “changing sheds.” Place your shuttle in this space without pulling it all the way through.
- d. **First beat** – Now we're going to beat down your first shot. Pull the shuttle firmly towards you, snugging the first shot down against the tension bar. Start to push the warp threads together as well, so there aren't any spaces between them.
- e. **2<sup>nd</sup> Shot** – Now pull your shuttle out to the right. You've just laid in your second shot. Keep the weft thread laid in at an angle up to the right this time.
- f. **Change sheds** – Now change sheds again, pulling up on the open warps again, locking your second shot into the warp. Place your shuttle in the new shed again.
- g. **Second beat** – Beat down your second shot against the first. After the beat, pull the weft thread firmly to start to even up your edges. You can use your fingers to finish evening out the distribution of warp threads. Don't worry if these first few rows look a little wonky, you won't be able to tell later after you work the finishes. The important thing is to get the warp threads all lined up nice and even in these first few rows so it's smooth sailing while you weave the bulk of this piece.
- h. **3<sup>rd</sup> Shot** – Now take your shuttle out to the left, laying in your third shot at an angle again. Always lay your shots in at an angle, this keeps the sides from drawing in as you get further along in your weave.
- i. **Change sheds** – Leaving the weft at an angle, change sheds again, and place your shuttle in the new space again.
- j. **Third beat** – Beat the third shot down against the last one again. Congratulations, you're weaving.

- k. **The secret to even edges** - After your third row of weaving, you'll notice that the weft leaves a tiny little loop on the opposite edge from your shuttle because of laying in your shots at an angle. That's good! Simply pinch the loop firmly between thumb and forefinger and pull on the weft thread from the other side. You'll be able to feel the loop slip up against the edge of the warp. This is the secret to even edges. Do this after every beat, you develop a rhythm for it very quickly. Also, don't be surprised if one edge looks better than the other for a while, they both even out with practice as you become accustomed to working with the fibers. Uneven edges also tends to be a symptom of uneven tension when you were warping. Practice makes perfect.
- l. **Advance the warp** - After you have woven 4 or 5 inches, you'll need to advance the warp again to continue weaving. Leaving your shuttle in the shed after your last beat, loosen the tension knob and allow some slack on the warp. Pull the warp forward with the shuttle until you have room to weave again, pretty much until the shuttle is up against the tension bar again. Keep an eye on the warping pegs again, making sure that nothing slides off the ends, and snug those warp threads back up on the pegs once you're done advancing. Pull the warp as tight as it will go and re-tighten the tension knob. As you weave, the tension bar will come forward less and less when you tighten the warp due to take-up. Now, push back on the shuttle to beat back the heddles, and continue weaving.
- m. **Getting to the end** - As you get towards the end of your weaving, and the knots in your warp come up over the top back peg (or top right peg, if you look at the diagram earlier in this document) you'll be able to see where you tied the first and last warp threads together floating on the top of the warp. Be a bit more gentle with changing sheds and beating at this point so that knot doesn't separate: it's under more tension than the rest of the warp threads. Try to keep weaving until the unwoven length at the end roughly matches the unwoven length from the beginning. This will become the fringe on the other end. Once you reach that point, you're ready to cut the weaving off the loom.
- n. **Cutting off the loom** - To cut off the loom, release the tension and allow some slack on the warp. Turn the loom so you are facing it from the warp side again. Cut the warp behind the knots as close up against them as you can. Then, pull the other end towards you off the loom, heddles and all, and cut off the knots at the ends. Now the heddles will just slide off the end, and you can save them for your next project.



## VI. Finishes

How you finish the ends will depend a lot on how you plan to use it. If you'll be using it for a trim, I recommend using a sewing machine to run over the ends with a zigzag stitch several times before trimming off the cut ends. You can try working some overhand stitches by hand around a cut edge, too, if you like, but the weaving may tend to pull out if you're not thorough about sewing into the fibers rather than between warp strands.

There is also a huge range of fringes that you can work into the ends. If that will suit your purpose, look at some macramé materials for creative ideas on that. In the meantime here are three quick ones. I usually leave my weft ends long, and just work them into the fringes with the warps. If you plan on working fringes, line up the two inkle ends together and trim off the loose warps so they are the same length on both ends before you begin.

- a. **Simple knots** – Knot the ends into simple overhand knots, right up against the finished end of the weaving. After working the knot, pull sharply on each warp strand in the knot to really tighten it down evenly.
- b. **Braided fringe** – Work the warp ends into braids and knot at the ends. You can try counting out the warp threads to make sure all the braids are the same width.



- c. **Twisted fringe** – A third option that looks nice is a twisted fringe. To make the twists that make up a twisted fringe, begin by separating out two equal bundles of threads for twisting together. You can either eyeball it, or actually count up the number of threads and divide it out so that each bundle is exactly the same. Twist up one bundle of threads between your thumb and forefinger. I usually twist left to right, but it doesn't matter which direction you go. Now, tuck the twisted bundle between two other fingers while keeping it twisted, to free up your thumb and forefinger to twist the next bundle. I usually use my other hand to help with the twisting. Now, **twist the second bundle in the same direction as the first.** It might take a try or two to figure out how to hang on to everything. Once done, knot the twisted bundles together at the ends, keeping tension on the twists. I knot onto the twisted parts, not the ends past where my twist ends. Once the knot is in place, let go, and the strands will counter-twist back on each other. Pretty nifty. If you don't want to do this by hand, lots of companies make little machines that do it, try Lacis for a hand-cranked one, or Leclerc for a little electric model. Twist up the rest of the warps, trying to line up your knots as evenly as you can. Next time, try twists with 3 or even four bundles

of threads. It's a challenge to hang on to everything, but well worth the result. Try adding beads or gewgaws, too.



## VII. Some Last Thoughts

Once you have the mechanics of basic weaving down, experiment with other fibers and techniques. Silk is fun, it squeaks when you change sheds, it can be a little unnerving. Try Halcyon Yarn Company, online at [www.halcyonyarn.com](http://www.halcyonyarn.com), for silk fibers in various weights. They have “mini-cones” available that consist of a few hundred yards so you don't have to buy a pound at a time while you try it out. There's also a 60/2 art-silk I get on eBay from Punita's East India Company, \$10 a box plus shipping, for making gorgeous ribbons and trims. Art-silk is 35% silk and 65% viscous rayon. Some novelty yarns and fuzzy or handspun fibers can be used as well. Play with tension to see if that helps.

Try weaving a “tubular warp.” Instead of passing the shuttle back and forth as for a flat weave, come back over the top and pass the shuttle in only one direction, and tighten the edges together as you go, forming a tube. It really works!

Try winding on a “basket-weave” warp. When winding on, do two heddle warps, then two open warps, instead of singles. When weaving, do double stranded shots to achieve a basket-weave effect.

Try adding beads! You can either thread them on the warp strands and beat around them as you weave, or thread them on your weft, and drop them in at the edges or randomly within the weaving.

Try multiple wefts, and leave open loops at the edges for trim. Heck, weave in sticks, and make wall hangings or ornaments.

Or, come to my pick-up class, and really get crazy with it. The possibilities are endless. Good luck and enjoy.