Drawing Braids for Handouts
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Christine Manges

Drawing Braid Diagrams to Illustrate Handouts

I encourage you to make diagrams for your handouts. Diagrams have the clarity of simplicity: all extraneous details can be left out. Things happening beneath what is visible (i.e., the path of lacing thread) can be indicated. Arrows can indicate direction or movement. There are no pesky shadows.

"But I can't draw…" Nonsense! Drawing diagrams is simpler than you think. If you can TRACE, you can DIAGRAM. And everyone can trace.

Try to always make your diagrams LARGE. Then, when you actually use them, copy them smaller or, in a program like Word, use the corner handles to make them smaller. This approach eliminates a lot of shakiness from the drawings and makes them look better. Also, use large black markers for outlines, *not* fine-line. When the drawings shrink, the outlines will shrink also, and can be too tiny if you use a fine-line.

A. Method #1: Stylized Braids

Why am I calling these braids "stylized?" Because, strictly speaking, these instructions will give you a braid diagram that looks similar to braids, and is easily interpretable as braids, but doesn't <u>exactly</u> duplicate the look of braid loops. Patterns in the braids, for example, are just a little bit "off." Everything else is clear and beautiful.
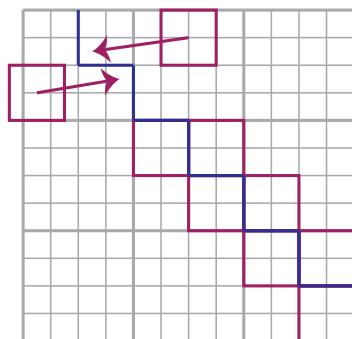
In this method, we will be using 2 simple shapes to draw a braid loop: a square, plus a quarter of a circle.
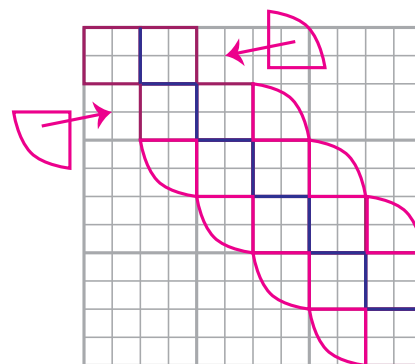
What you will need:
-Pencil
-black magic marker
-sunny window or lightbox
-colored markers, if desired
-good eraser
-graph paper (4 squares to inch)
-white office paper
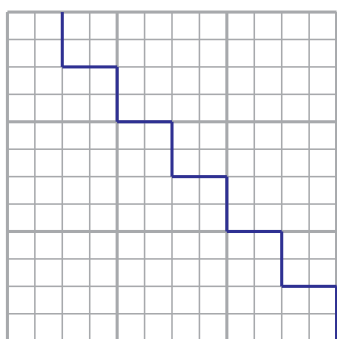
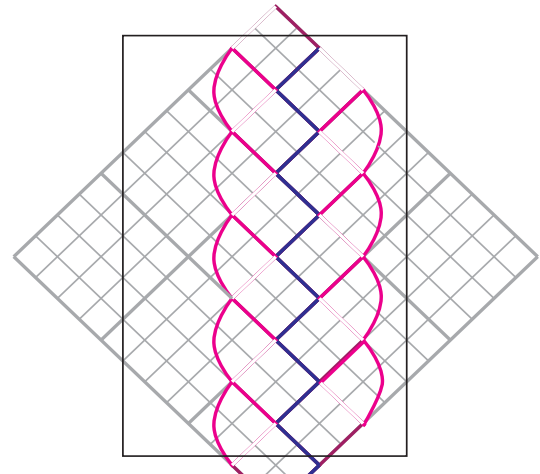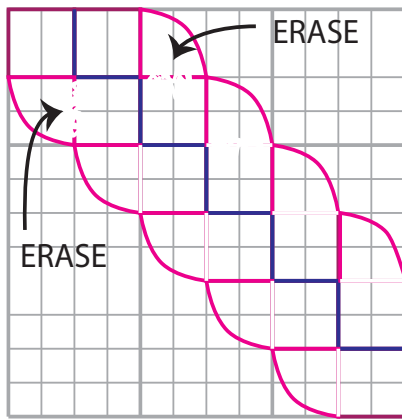**1. Stair step** -Draw a stair step zig-zag on graph paper, changing direction every 2 blocks.

2. Draw a square nested against the inner aspect of each of the zig-zags.

3. Now draw a quarter-circle along the upper outer aspect of each square. Keep the quarter circle nicely plump.

4. Erase the line between the quarter circle and the square, so that you end up with braid loops looking like this:

5. Put the graph paper up on a sunny window or a lightbox. Lay the white office paper over it, and line the edge of the paper with the graph paper boxes so that the edge is along a perfect diagonal (to orient the braid vertically or horizontally on the white paper). Using a pencil, **trace the braid outlines**.

6. Away from the awkward window and at a comfortable desk, use **magic marker to outline** the braids. If desired, color in the braids first, then outline them with the black marker. Erase extraneous pencil marks. If you color the loops, make sure your loop color is dry before outlining with black, or the black lines will blur from the wetness.

To use these diagrams, you can either go low-tech or high-tech.

• **Low tech** is to type up your handout, leave space between paragraphs for the diagrams, cut out the diagrams and tape them onto the page (use matte tape, not shiny). Then copy the page for your handouts.

• **High tech** is to take a **photo** of or **scan** the diagrams (use "Notes" on your phone, which has a scan function, if you have Notes), then use Word or a similar program to insert them into the text. The advantage of the latter approach is that you can resize the diagram by using the "handles" on the corners, flip it right or left to mirror image it, and put a border on the edges if so desired.
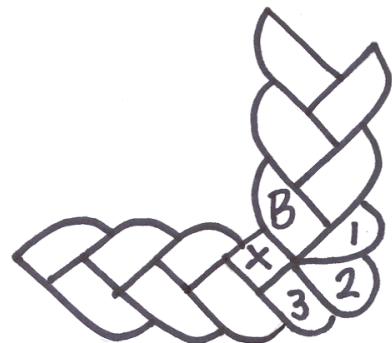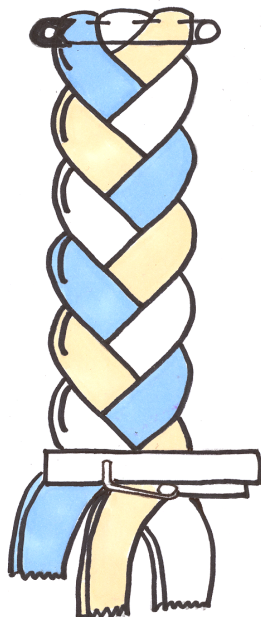
1. You can indicate folds (right opening or left opening) with simple curved lines – see diagram left.
2. You can stack the rows of braids and draw lacing patterns (middle)
3. Here's how to triple corners (again, stylized, but easily interpretable)
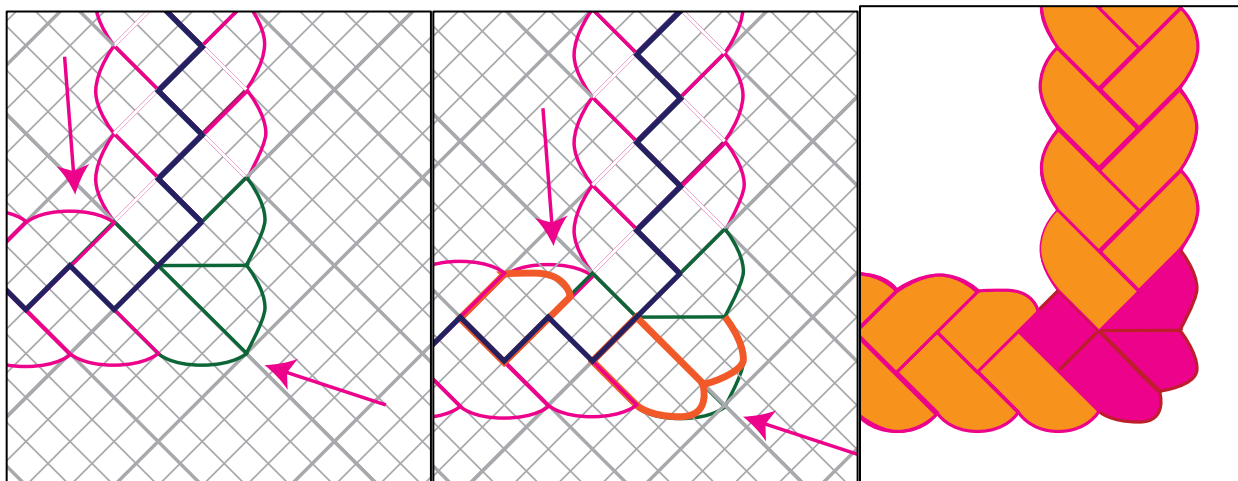
Triple corners are easy to draw, because a triple makes a 90° angle that fits neatly onto graph paper.
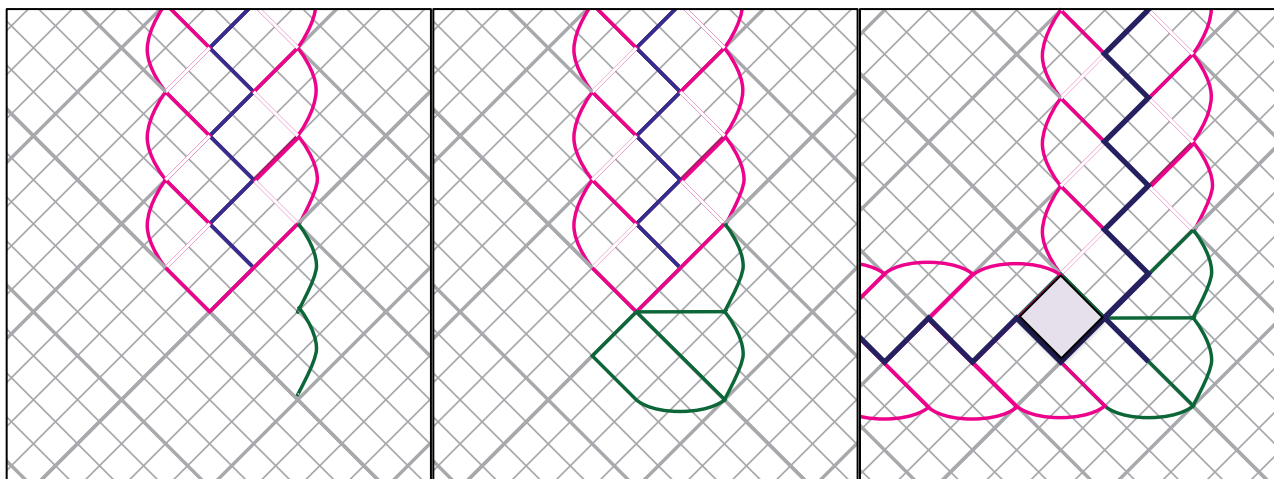
1. Draw 2 curves over the next two blocks down.

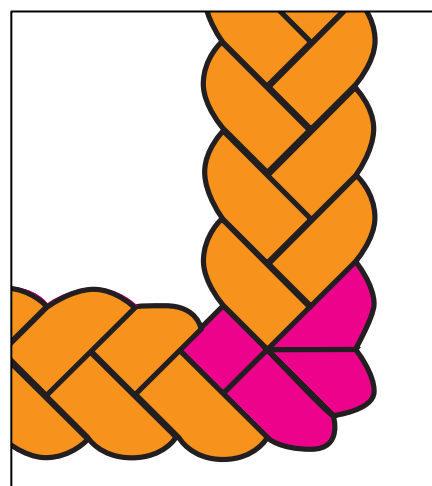2. Draw another loop – upside down. (Block + Quarter circle).

3. Draw a square (see lavender box), then add new loops to the left.

4. Arrows point to the areas that need fixing.

5. Shows how to fix the problems.

6. Trace onto white paper with light pencil. Color in the loops with markers.

7. The last step is to use a black marker (not fine tip) to draw the outlines…. and cover up any wiggly edges! Add numbers and an "X" for crossover loops.

Note: If you plan to draw corners for alternation – how they are laced differently in odd and even rows – that's more complicated.
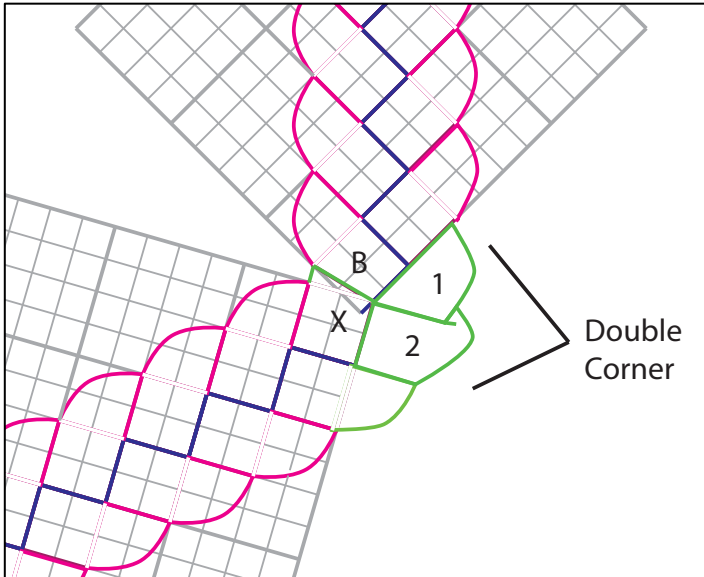
But what about the 60° angle (roughly) of a **double corner**? Use 2 pieces of graph paper, one for the braid before the double, one for after, and tape them together where they match up.

If you want to be extremely precise, make the braids fall at a 120° angle to each other.

Hairpin Turn

Finally, what about drawing the hairpin turn for oval rugs, where there are two double corners?

This drawing doesn't work perfectly…. For one thing, you need to draw the curves of the straight braids a bit flattened where they will be e-laced. Another problem is that the crossover loops have to be rectangles rather than squares.   And…. the corner loops are weird.
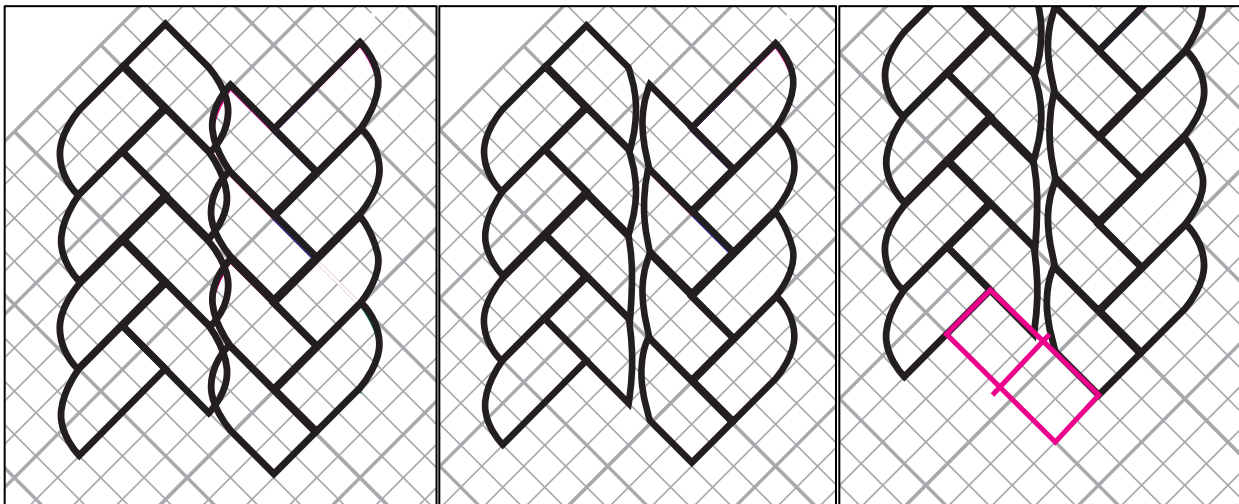
1. Shown two braids drawn next to each other for e-lacing or shoe-lacing. Note that the loops overlap.

2. Drawing corrected to flatten both braids' inner loops.

3. Draw a rectangle to fill the space shown. Draw a line down the center of the rectangle.
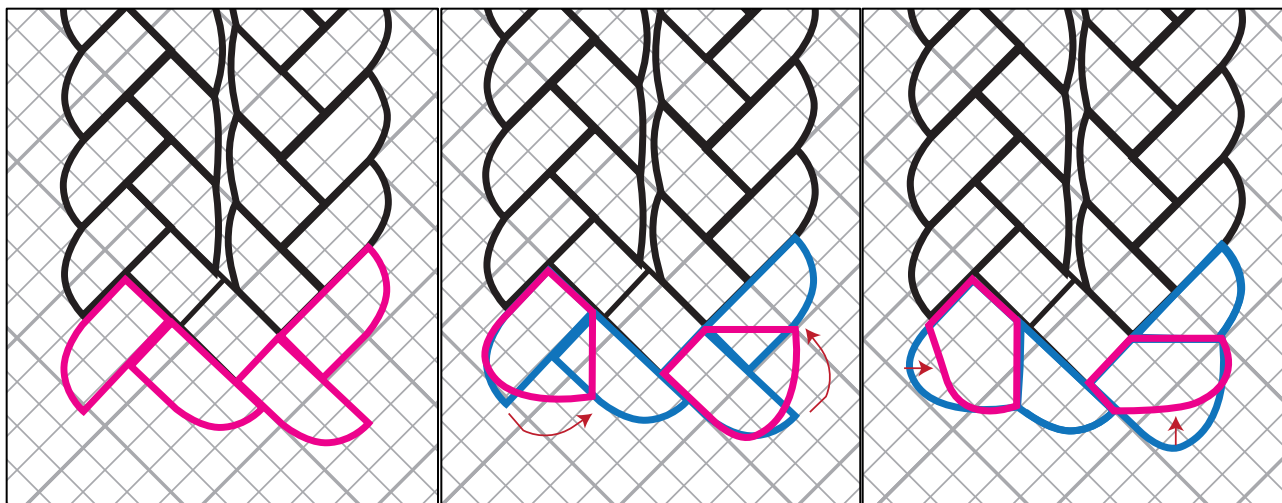
4. Add 4 loops as shown. Two are in line with the braids above and below; the middle two are at right angles to the outer loops.

5. Redraw the Loop 2's of the double corners so that their points are at the center-side of loop 1's. Erase lines inside the bounds of the new Loop 2's.

6. Redraw the loop 2's so that the loops reduce their outward bulge.

7. Trace image onto copy paper with light pencil. Color in the loops with marker.

8. Draw loop outlines with black marker. Add numbers if desired.

B.   Method #2: Scan or Photo & Trace

Let's say you're trying to illustrate a detail that involves something unusual… curving braids, a double laced to a triple corner, or a diamond-shaped braid, etc. Using graph paper, it might be hard to draw the braids so that all the loops come together properly, especially if you're using stylized loops.

Instead, use **Method 2 for tracing**, which traces the outlines of loops from an actual braid. While I'm suggesting this method for complicated

> **What you will need for Method 2:**
>
> -pencil
> -good eraser
> -sunny window or lightbox
> -colored markers, if desired
> -white office paper
> -black magic marker (I like Sharpie thin line)

braids, it can also be used for simple braids. Since no graph paper is involved, some might find it simpler (although, the loops will be more irregular in shape and can be a little harder to "read.").

Try to only copy braids that are light in color and devoid of pattern. Darker braids' loop outlines don't show up well enough for this method to work, so keep your fabrics light and plain.

Either: Place your braid on your scanner or copier. Press down firmly with the cover, and scan or copy. Print.
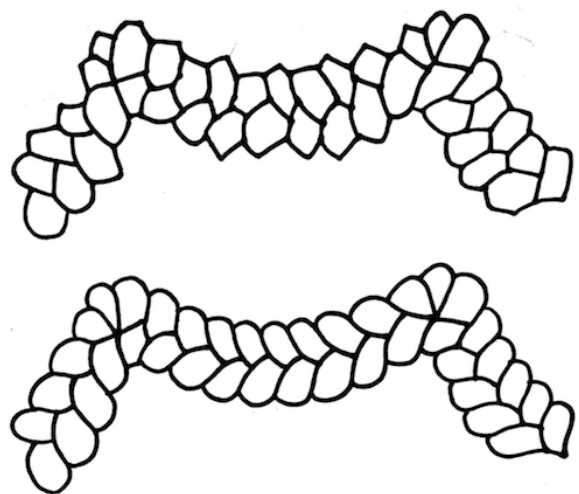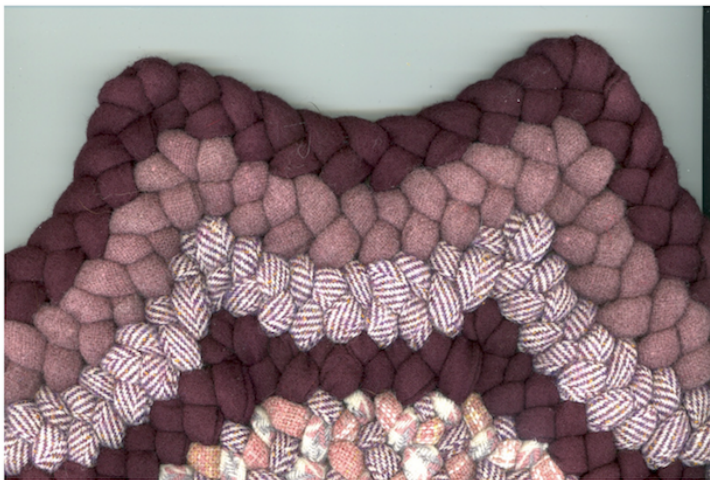
Or: Take a well-lit photo of your braids. Print.

Use the printed copy to hold up to the window with some white office paper covering the image. Use a pencil to draw the outlines of your loops. This can be harder than you think, especially if your braids are small and shadowy: try enlarging the scan or copy before you print it.

After you trace the loop outlines with pencil, you may have to do some "editing" before you start coloring in loops. Make sure every loop is outlined clearly and that its path makes sense within the tracing.   See next page.

Above left: Scanned braids in a curved and cornered design… which would be difficult to simply draw out using graph paper.
Above right: Top diagram shows the traced outline of the lightest row of braid. Bottom diagram shows the braid after it has been "cleaned up" to make it smoother and more easily interpretable.