How To Make and Use a DIY Back-strap Loom

By: George Holt
First select the yarn that you want to use to weave your textile. I’m using a white mercerised cotton yarn and an orange merino wool yarn. Ideally you should use yarn that have low friction and do not catch on each other. This will make sense later. However, I use cotton and wool to show that these yarns are still useable.

Next you need to collect or buy planks of wood that are longer then the width of the textile you want to weave. Two of these planks will act as the loom frame. For my back-strap loom design the distance that you place these two frame planks apart is a bit around half the length that you want the final textile to be. So if you want the textile to be one meter long you should place the two planks around half a meter apart.

Next tie a sting using a simple knot to attach the two frame planks. These will not be used for weaving. They are a temporary support to stabilise the loom whilst you apply the warp yarn to the loom. Taking them off is the final step.
Now you must find somewhere to secure your loom to act as a counter weight. I’m using a stair banister. Use a string to tie one of the frame looms loosely to whatever you are using. You should tie the string to the extremities of the frame for maximum stability.

Next tie a string on the other frame in the same way that you did the first string. This will act as tieback strap.

Now we are going to tie the warp yarn onto the frames. You can do a simple knot on the frame further away from the back-strap. The image is deceiving because I change it later. Tie the yarn on the other frame seen in the picture above. Tie this yarn in the centre of the frame. This will be the only knot you tie onto the frame from the yarn and it is not permanent.
Then we loop the yarn over the middle of the two frames. We do it in the middle to increase the stability of the process. On a smaller frame this is less important but mine is very wide.

You can move the warp down the frame when you've made a large enough warp threads that it is off centre using your fingers. Move the group of warp threads towards the side where you've tied the first knot to the frame.
One way to speed up this process is use a dummy such as these weights to create tension in the loom without you having to sit there. This is especially necessary on looms where it is too long to reach to the other side in a sitting position such as the one I've made.

When switching between different warp yarns tie the two different yarns together using a flat knot. Don't tie them onto the frame. Make sure they are all in the same area because this is where were going to potentially cut the fabric in the future.

Once you've created enough warp strands for the width of your textile now you have to separate them for weaving. You should find that there are two layers of warp. Create a shed stick out of a plank of wood and weave through the warp that is on top of the frame.

Next we are going to create the heddle which will allow us to distort and weave in the warp. Using a string that has a low friction create a heddle. The heddle pulls yarn thats been separated and is below the shed stick above the shed stick. To create the heddle first knot the string on the stick, sew the string between two upper warps yarns, behind a single lower warp yarn, back through the
same two upper warp yarns over the heddle stick and through the next pair of adjacent upper warp yarns to repeat these actions.

Before we weave the textile we need to increase the tension even higher on the warp. Collect some sticks or planks that are longer than the width of the warp. The longer the warp usually the wider you should have these tensioning sticks so that more slack in the warp can be pulled apart to create tension. See on the next page how to use the heddle and shed stick to weave these tensioning sticks and the weft.

This is what the final warp should look like before you start weaving on it.
When you lift the heddle pull it forward, away from you, and backwards, towards you, to create space between the top and bottom warps. Run your finger or your batten through this gap to separate the warp even more.

If you are using wool as your warp yarn occasionally some of the fibres will shed onto the heddle and cause some of the warp to get stuck. The warp you see here is not in a regular ‘x’ shape which is a result of some of the warp getting stuck.
To get all the top warp below the bottom warp follow the warp strand that are not producing this ‘x’ formation and pull them down manually. You may find that they are stuck by some small amount of thread that has gathered on the heddle. You should clear this fibre before continuing.

Next push the bobbin through the gap and use tap the weft using the batten to tighten the woven sections.
When switching between bobbins to produce different colours I knot the two wefts together not to the warp at the edges. Next I turned the shed stick to its wider side and moved to up to the heddle. This creates a gap on the other side of the heddle. Pull this gap away from you using your finger or batten. Finally, make sure that the top and bottom warps are completely separated.
I noticed with the wool yarn that the warp tended to buckle after being woven and this is a result of a lack of tension because the wool has a lot of stretch in it, the tension can be hard to maintain.

To solve this problem identify the warp string that is buckling and pull it gently.

The result is the buckles disappear leaving a more uniform appearance.

Once you've woven one side of the frame we
can now rotate the warp to continue weaving on the other side. To do this reduce the tension of the frame by moving your body towards it. This will make it easier to move the warp. Next rotate the warp around the frame so that the woven section is moving away from you and more unwoven warp from the other side of the frame is being exposed. Do this in small steps instead of one large move because it is more stable and make the frame far less likely to give out and drop the warp. Then continue weaving until you’ve covered the entire warp.