



# weaving



## what is it?

It's a way of making cloth/textiles using spun fibre on some sort of loom (although sometimes unspun fibres can be used - on a peg loom, for example). The vertical threads are called the warp, and the horizontal threads that are woven through them are called the weft. The warp is made on the loom, and tied to it in different ways, depending on the type of loom. The warp is tensioned and threaded through a 'heddle'. A space (or a 'shed') has to be made in the warp to allow the weft through. This is done by raising or lowering the heddle, then the weft is threaded through the shed, either by hand or via a shuttle or bobbin loaded with yarn. Then the next shed is opened, and the weft passed back through for the next layer. This process is repeated until the fabric is the size you require, after which you cut and tie the warp, and you have your finished piece of woven fabric.

There is evidence of weaving going back to the stone age, but textiles are biodegradable, so it's unusual to find preserved pieces. Every culture had or has its own style of weaving. Here are some different types of loom.

**Peg loom:** very simple - you have a board with 9mm holes drilled into it, then 15cm pegs with holes drilled through them are inserted into the board. The warp threads are passed through the holes in the pegs, the weft is woven around the pegs to the top, then the pegs are removed, the item pulled down onto the warp, the pegs replaced - and so on, increasing the size of the item each time. Peg looms can be used to make peg loom rugs, seat mats or bags with unspun fleece.



*Peg loom weaving session.*



*Plain weave showing warp & weft threads.*

**Backstrap loom:** the width of a human; the ends of the warp are tied to a post or a tree, and a strap goes round your back. As you lean back, it tensions the warp, then you use the heddle in front of you and weave the weft with a bobbin. Colourful patterned textiles are made this way in Guatemala and Peru.

**Navajo looms** are large, usually upright, native American looms. **Inkle looms** are narrow, for making belts or thin strips of fabric. The **Ashford knitter's loom** (and some others) are based on a rigid heddle and frame. The **Brinkley loom** is a wooden frame with a non-rigid heddle. The **rigid heddle loom** is a good, introductory all-rounder, the **rigid heddle loom** is a simple frame, often used on a table.

**Floor/treadle loom:** larger looms with different pedals to change the shed - i.e. to lift various threads depending on the kind of pattern you want. **Table looms** are similar to floor looms, but smaller. Inevitably, handlooms began to be outnumbered by power looms by the mid-19th century, and now most fabrics are produced on an industrial scale in large factories.

## what are the benefits?

- you can produce useful items for yourself, your family and friends
- your items will be unique
- you can contribute to your local economy by setting up a cottage industry and selling a few pieces
- you can control your raw materials, so that only natural, organic fibres and dyes are used
- it's an interesting, fun thing to do, and you can gain and pass on useful skills
- as with all Lowimpact.org topics, it's a small antidote to the bland near-monopoly that large corporations have over the necessities of life



Weaving on a rigid heddle loom.

## what can I do?

It's not possible to explain exactly how to do it with words and pictures - you really have to have a go. See our website for weaving courses around the UK, as well as our online course. A simple way to practice weaving, or to demonstrate it to children, is to make notches on a piece of cardboard, or use a picture frame with nails at both ends - make the warp on the notches/nails and thread the weft through with a needle.

If you do decide to take up weaving, you can make a huge range of household items - blankets, shawls, scarves, ponchos, cushions, bags, rugs, chair covers etc.

First consider what you want to weave, and then choose a loom – or consider what you can weave with whichever loom you can make or acquire.

More sustainable fibres (depending on your location, how they're produced, on what scale, and on how far they've travelled) include nettle (for ramie), flax (for linen), hemp, wool, organic cotton, banana silk, and bamboo (for rayon).

Source wool from small, trusted, nearby (rare) breeders, and source plant fibres from organic and small growers. To reduce fossil fuel dependency, resist the power of the oil industry, and lower your carbon footprint, avoid petro-fibres. These are polymer-based synthetics like the all-too-common acrylic, nylon and polyester – plastics, in other words. (Recycled petro-fibre clothes reduce plastic bottles etc. to microbeads, which are an even greater environmental hazard.) Make a non-toxic, breathable and biodegradable fabric instead.

Choose a warp that is strong and even, with a high enough twist for strength but not so twisty

that the wool springs into curls when relaxed off the cone or ball. Handspun yarn is generally harder to work with as a warp if it's irregularly spun, which it often will be. However, you can make your own yarn for weaving by carding your own fleeces (or even shearing your own sheep); or by growing and processing natural fibres, then spinning and vegetable dyeing them yourself too. Eventually, a scarf can be made in a day, and a blanket in three or four days, depending on your process. If you account for your time, items will appear expensive – most low-impact methods cost less in resources and more in labour. (The converse is also true: mechanisation and economies of scale tend to come at a higher environmental, as well as socio-economic, price).

Q: Why weave your own clothes, grow your own veg or make your own furniture, when you could work more in paid employment, and buy those things from a supermarket or a sweatshop?

A: For pleasure, fulfilment, resilience, autonomy, therapy, skillbuilding and skill conservation; for the local economy; and especially for the lower environmental impact of producing useful items sustainably, right here at home, just as you want and need them.

## resources

- see [lowimpact.org/weaving](http://lowimpact.org/weaving) for information, courses, suppliers and books, including:
- Anne Weil, *Weaving Within Reach*
- Deborah Chandler, *Learning to Weave*
- Jane Patrick, *the Weaver's Idea Book*
- [wsd.org.uk](http://wsd.org.uk) - Association of Guilds of Weavers, Spinners & Dyers
- [activityvillage.co.uk/weaving](http://activityvillage.co.uk/weaving) – projects for kids
- [bbc.co.uk/1/hi/sci/tech/790569.stm](http://bbc.co.uk/1/hi/sci/tech/790569.stm) – woven cloth dates back 27,000 years!



Traditional native American Navajo loom.

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