

Workshop no.2

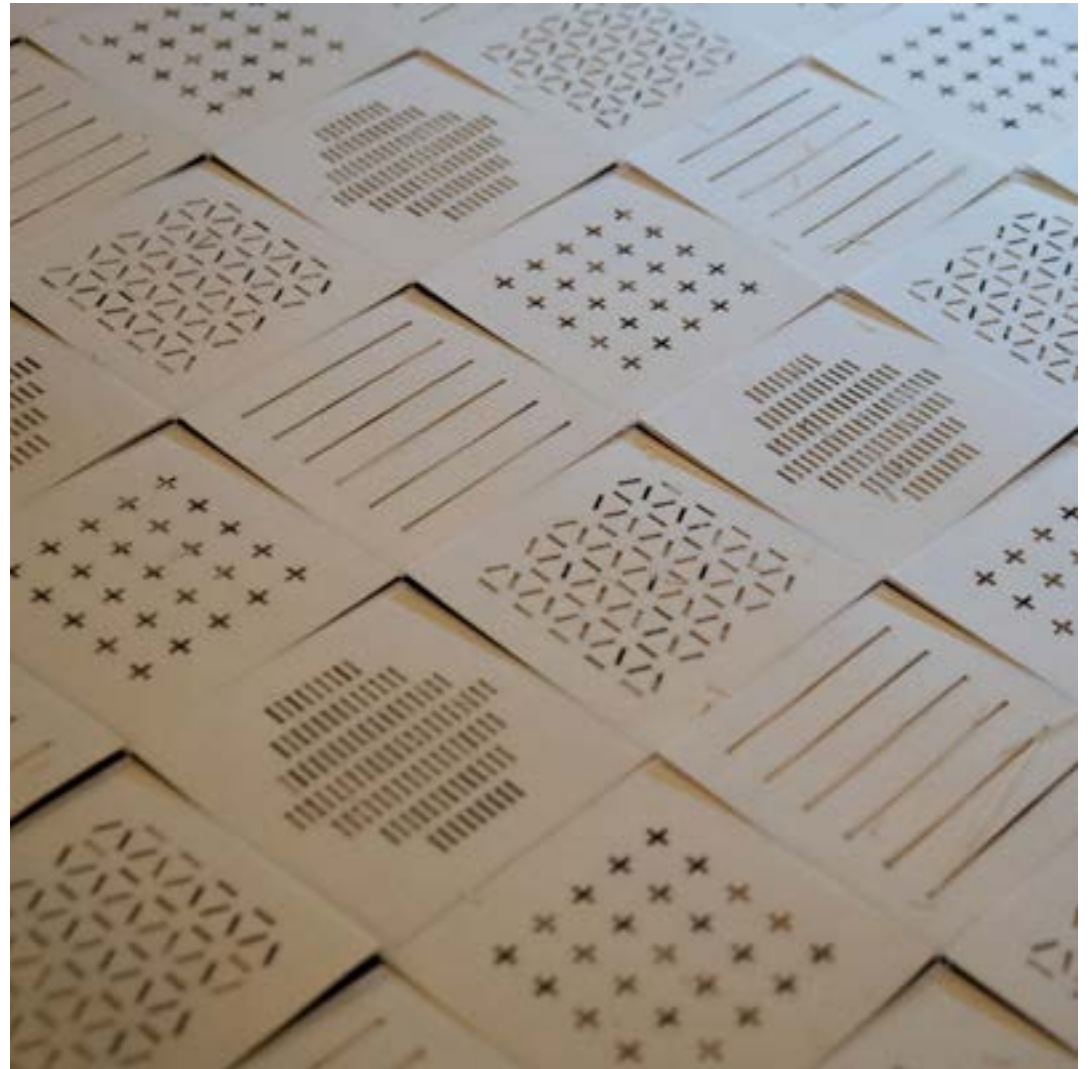
A hole new story jumper & socks edition



Don't let your textiles go to waste workshop series

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1.

Who are we?



TextileLab Amsterdam

TextileLab Amsterdam is a group of people that researches, questions and speculates how we can help transition the textile and clothing industry towards a more sustainable and value driven approach. From a holistic approach we look at materials, tools/instruments, processes, culture and systems and how these are related.

The research always has a collaborative and value driven nature, where findings are shared in a fully open source fashion to create knowledge exchange and foster collaboration with a range of diverse stakeholders. Circular economy, sustainable value flows and networks, as well as material research and innovation are at the core of the TextileLab operations, going hand in hand with exploring informal hands-on alternatives for design, fabrication and production. This wide range of operations and outcomes all feed into education innovation, supporting the change of this field starting from existing educational structures.



Pictured above (from left to right):

Cecilia Raspanti

*Co-founder TextileLab Amsterdam,
Co-founder Fabricademy: textile academy*

Ista Boszhard

*Co-founder TextileLab Amsterdam,
Lecturer Amfi*

Margherita Soldati

*Concept developer and Designer TextileLab Amsterdam,
Independent Artist*

Beatriz Sandini

*Concept developer and Designer TextileLab Amsterdam,
Independent Designer*

REFLOW

Textiles have been a critical and polluting industry since the Industrial Revolution – each year, 14,000 tons of textiles are thrown away in Amsterdam only. The Amsterdam Pilot will increase the recycling percentage of home textiles, through redesigning diverse methods for collection with citizens, while providing feedstock for the recycling industries.

Within the REFLOW project, the Amsterdam Pilot aims to bring the local textile flow from linear to a circular model.

One of our goals is to increase the clothing lifecycle through empowering you to become a circular change maker!

Mismatching socks? Holes in your jumper? Holes in your favourite jeans? Stained shirt?

Help us stop this waste and get all the value out of your old clothes and textiles! Become a circular hero by joining a series of online workshops and learn how to mend, repair and colour your clothes to give them a new life. The workshops can be visited separately and you do not require any particular skills.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement number 820937.



Discarding textiles

Did you know that every year about 70% of all discarded textiles in Amsterdam end up in the wrong bin and get incinerated? And this corresponds to about 9 thousand tons of textile burned to ashes!

You can contribute to recycling and reusing of textiles by properly addressing your discarded textiles. Check the link from Amsterdam city hall on where to find the designated textile bins.

Where to throw away your used textiles

[City of Amsterdam clothing collection information](#)

Some extra information on circular economy and proper textile discarding in Amsterdam:

[Video \(in Dutch\)](#)

The Amsterdam based Partners of the REFLOW project are the city of Amsterdam, Pakhuis de Zwijger, Metabolic, BMA-Techne and Waag.



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Darning

DO'S AND DON'T'S

A neat darn is a real badge of honour these days—and, done in good time, it can lengthen the life of a garment by months and months. Here are some hints on everyday darns and how to set about them; with some general rules for your guidance.

Do darn on the wrong side directly a thin place appears.

- tack a piece of net on a large hole and darn across it for extra strength (see linen darn)
- darn well beyond the weak place.
- leave loops at the turns to allow for shrinking.
- settle yourself comfortably in a good light before you start.

Don't

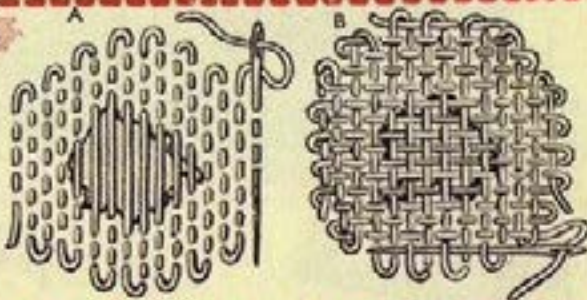
- wait for a hole to develop.
- use thread too coarse or too fine
- make straight edges to your darn; a little irregularity distributes the strain.
- pull the thread taut or it will pucker.
- expect to make a success of a job by hit-or-miss methods.



To darn a Hole

A. Weave the needle in and out to make a darn of an irregular diamond shape, working well beyond the thin area surrounding the hole.

B. Turn darn round and work across the hole in the opposite direction, remembering to leave tiny loops at the end of each line of stitching and to weave in and out of the first strands across the hole.

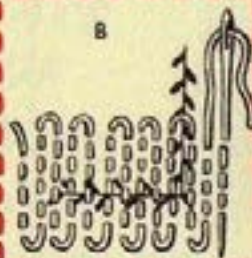


To darn a tear



A. First tack a piece of paper behind the tear, to hold edges in position. Then fish-bone stitch the edges of the tear together. Use fine thread of same colour.

B. Take darning stitches well beyond tear, right across base, forming a rectangle.



C. Turn work round and darn in the same way across the other part of the tear. A solid square will be formed at the corner. Now remove tacking thread and paper.



2. Mending: a story of tradition & care

Mending used to be a widespread household practice. Linens and clothes were carefully maintained. The main motivation was economic: it was much cheaper to repair fabrics and garments than to purchase new items.

Textile history is filled with compelling mending examples of repairs. In the eighteenth-century Great Britain and Holland, young girls learned how to mend on darning samplers. They patiently filled holes in pieces of fabric with colorful embroidered patterns that reproduced woven structures. Until the late nineteenth century, Japanese common people perfected their repair techniques with their beautiful boro patchworked garments stitched in sashiko technique.

The Make Do and Mend ethos flourished in France, the United Kingdom and the United States in the 1940s. Materials rationing imposed during World War II highly impacted the apparel industry. Buying new was limited by coupons, which encouraged people -and women especially- to take good care of their personal belongings and find creative ways to make their own clothes. The Make Do and Mend message was advertised by governmental campaigns as a patriotic duty. It was promoted through numerous booklets, posters and magazines that shared tips and techniques to remain stylish, repair materials, and make old new again.

Dutch tradition

Stoplap, a Dutch term for the 'darning sampler'. The stoplap was common between the 17th and 20th century, and functioned as a tool to teach women, especially orphans, a trade that would allow them to earn money independently by repairing clothing.

Young girls (between 12 and 15 years old) created in order to practice a variety of needlework techniques and darning stitches.



Above: Stoplap, the Dutch 'darning sampler'

Sashiko (lit., “little stabs”) is a type of traditional Japanese embroidery or stitching used for the decorative and/or functional reinforcement of cloth and clothing. Owing to the relatively cheap nature of white cotton thread and the abundant nature of cheap, indigo-dyed blue cloth in historical Japan, sashiko has a distinctive appearance of white-on-blue embroidery, though some decorative pieces may also use red thread. First coming into existence in the Edo period (1615-1868), sashiko embroidery was first applied to clothing out of a practical need, and would have been used to strengthen the homespun clothes of olden times. Worn out clothes were pieced together to make new garments by using simple running stitches. These clothes increased their strength with this durable embroidery.

Sashiko was commonly used to reinforce already-patched clothing around points of wear, but would also be used to attach patches to clothing, making the fabric ultimately stronger. Though most sashiko utilises only a plain running stitch technique, sashiko is commonly used to create decorative and repeated embroidered patterns, and may be used for purely decorative purposes, such as in the creation of quilts and embroidery samplers. The technique utilises mostly geometric patterns, which fall into two main styles; **moyōzashi**, in which patterns are created with long lines of running stitches; and **hitomezashi**, where the pattern emerges from the alignment of single stitches made on a grid.

Boro is the result of repetitive Sashiko stitchings over and over for many generations. The Japanese had to use the fabric even it gets tattered beyond the normal usage.

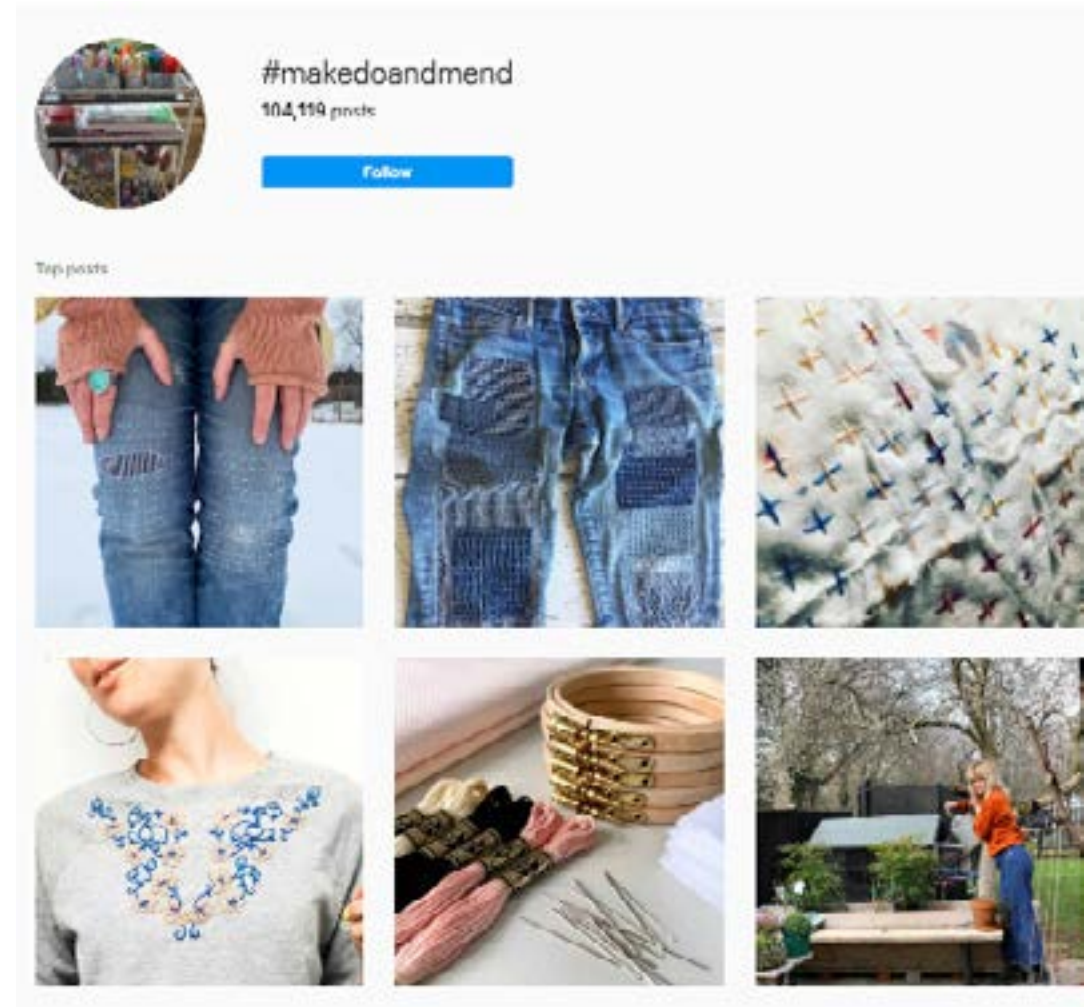


Atsushi Futatsuya

#MakeDoAndMend

Today fashion and textile items have become extremely affordable. Repairing our garments has lost its appeal for the majority of us who have given way to the sirens of fast-fashion. However there is an increase of the slow-fashion movement and revaluing these traditions as precious techniques and skills.

Mending can play a positive role in reducing energy, raw material and water consumption. This artisanal practice may also be considered as a reaction against the throwaway culture that has become so prevalent. Repairing our damaged garments and textiles is an opportunity to rethink our relationship to our everyday objects. It may sound like a difficult task, but it can be as simple as replacing a missing button, removing a stain, fixing a lining, hemming a pair of pants, or patching a hole.



#makedoandmend on instagram

Books and Inspiration

These are some of our references and inspirations that will bring additional information and techniques on mending and repairing.

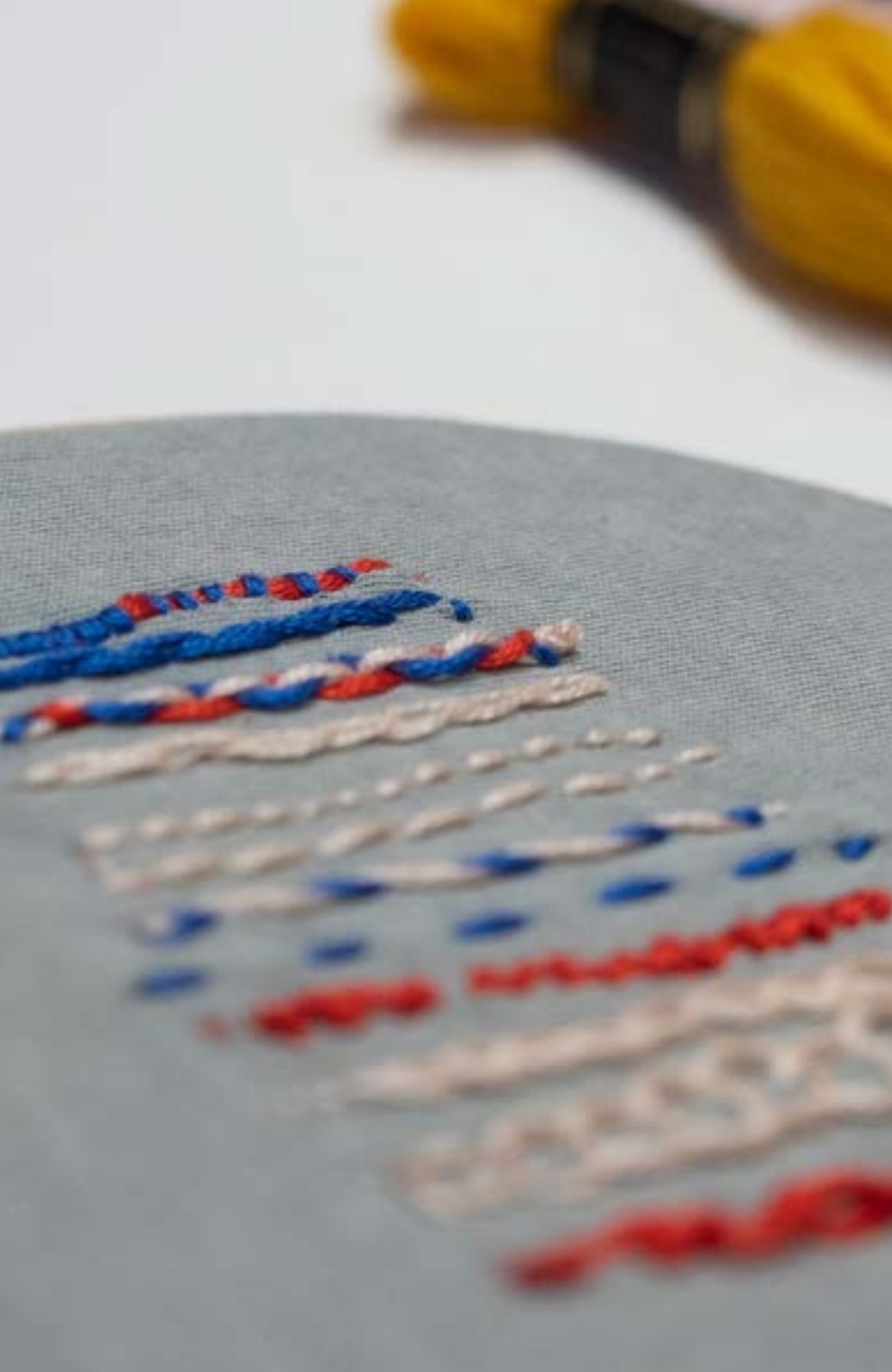
Books

- [Make and Mend - book page](#)
- [Make and Mend - PDF with stitching patterns](#)
- [Mending Life](#)
- [Slow Stitch](#)
- [Mending Matters: Stitch, Patch, and Repair Your Favorite Denim & More](#)

Inspiration

- [@sashikostory](#) (sashiko)
- [@sashikodenim](#) (sashiko)
- [Sashiko Story Youtube](#)
- [@thefarwoods](#)
- [@katrinarodabaugh](#)
- [@collingwoodnorris](#) (mending & darning)
- [@celiapym](#) (mending & darning)
- [@ofeliayantelmo](#) (embroidery & textile art)
- [@hikaru_noguchi_design](#)
- [@mendingbeautifully](#)
- [@tickover](#) (embroidery & activism)
- [@wrenbirdmends](#) (socks darning and sashiko)
- [@tomofholland](#) (visible mending)
- [Caroline Bartlett](#)





3.

Fabrics 101



Above: mending by Beatriz Sandini

Fibers - natural, artificial and synthetic fibers

I. Natural fibers

Made from plant, animal or mineral extracted fibers. Ex: cotton, linen, hemp and natural fabrics made from animals such as wool, alpaca, silk, cashmere

Pros:

- The fibers are very intertwined, but extremely breathable and soft
- Usually extracted without the use of toxins or chemical processes harmful to the environment
- All natural fabrics are biodegradable
- Easy to recycle via mechanical recycling

Cons:

- Higher production costs, especially compared to synthetic fabrics
- Land, water and pesticide intensive farming activities
- The characteristics are static, that is, we cannot improve them without adding chemical additives

II. Artificial fibers

Natural raw materials are transformed into fibers thanks to chemical processes (ex: Modal, Lyocell, Bamboo, Viscose, Rayon, Vegetable Silk)

Pros:

- The natural raw material makes them less harmful to the environment than the petroleum of synthetic fabrics.
- They maintain the main characteristics of natural fabrics unaltered: resistance and breathability.
- Production and retail costs are lower than for natural fabrics.

Cons:

- When not certified, they use chemical processes that are harmful to the environment.
- All chemical processes wastewater and also electricity.
- The chemicals are absorbed by our skin
- Difficult to recycle, needing chemical recycling technique



Above: Mending by Collingwood-Norris



Above: mending by Tom of Holland

III. Synthetic fibers

Derived from synthetic materials and mostly made up of petroleum waste. Ex: Some examples of synthetic fibers are Nylon, Polyester, Elastane (Spandex), Polyurethane, Newlife, Econyl

Pros

- Very low production and sale costs of the final product
- It is easier to make several variations of the same product
- The characteristics of the synthetic fabric can be improved thanks to the chemistry
- High weather resistance
- They are not attacked by moths and molds
- Can be recycled via mechanical recycling (PET into Polyester, via shredding, melting and extruding)

Cons

- Synthetic fabrics can be considered as one of the main factors triggering pollution from microplastics
- Depending on the fabric it can be not very breathable they facilitate the proliferation of bacteria and require frequent washing
- They are not biodegradable and this is causing serious landfill space problems
- Cause of allergies and skin problems
- Often natural fibers are combined with synthetic fibers resulting in fabrics with mixed composition, which creates a big problem for recycling once separating the fibers is a complex, energy consuming and costly process

Fabrics - woven vs. knit

Fabric can come from various materials, including linen, rayon, spandex, lycra, viscose, and cotton. However, the preparation of almost all fabric falls under two main fabric types: knit or woven.

Knit fabric is a textile that results from interlocking yarn together with long needles. Knit fabric falls into two categories: weft knitting and warp knitting. Weft knitting is a fabric knit in which the loops run back and forth, while warp knitting is a fabric knit in which the loops run up and down. Manufacturers use knit fabric to make items like t-shirts and other shirtings, sportswear, swimwear, leggings, socks, sweaters, sweatshirts, and cardigans. Knitting machines are the primary producers of modern knit fabrics, but you can also hand knit the material using knitting needles.

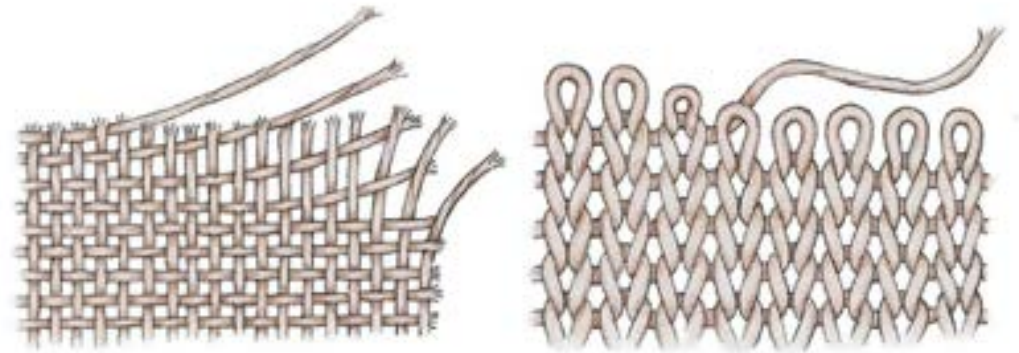
Common types of knit fabric include: Jersey knit, Purl knit, Rib-knit, Fleece, Cable Knit, Jacquard, Rasche, Tricot, Velour.

Woven fabric is a textile that results from weaving two sets of yarn together. Manufacturers use looms to weave vertical warp threads and horizontal weft threads together to create woven fabric. Upon close inspection, woven fabric resembles a checkerboard of straight interlacing threads going under and over each other in right angles, similar to a woven basket. Woven fabric is a common textile for structured items like blazers and coats and upholstery items.

Common types of woven fabric include: Corduroy, Denim, Flannel, Chiffon, Muslin, Poplin, Chambray, Velvet, Taffeta, Organza, Crêpe.

Choosing what/how/when to repair?

- Quality item that has more chances of long-lasting life
- Preference for mono-material composition > 100% cotton or 100% wool
- Allow the mending process to be a pleasant offline activity, collect inspiration online, choose a color palette and allow changes throughout the path
- Inspect your items and try to repair when there are signs of wear



Above: The left side woven and the right side is knit

Denim, jeans, indigo?

Denim is a strong cotton fabric made using a twill weave, which creates a subtle diagonal ribbing pattern. First produced as serge de Nîmes in France in the seventeenth century, the cotton twill fabric is warp-facing, meaning that the weft threads go under two or more warp threads. The warp yarns are more prominent on the right side—these diagonal parallel lines make denim fabric different from other sturdy woven cotton fabrics like canvas or cotton duck.

Denim is usually colored with **indigo dye**, resulting in its characteristic blue-cotton color. After denim is colored, manufacturers can wash, rinse, or distress the fabric to produce a wide array of denim, from dark-wash to light. Manufacturers use a different dyeing process to create black or white cotton denim.

Jeans are casual-wear pants typically made from denim fabric. Patented in the nineteenth century in the United States by Levi Strauss and Jacob Davis, a typical pair of jeans usually features a button clasp, a zipper, belt loops, and front and back pockets, with copper rivets to reinforce the pockets.





4. Material kit explained

Material kit explained

We prepared the ultimate starter kit for repairing your loved clothes. Inside your box you will find all the necessary tools to start this journey on visible mending.

- Wooden Embroidery Hoop
- Wooden Darning Mushroom (for mending socks or gloves)
- Mixed colors of [100% Cotton Mouliné Threads](#)
- 2 Chalk Pencils
- Set of [Tulip Sashiko Needles](#)
- Set of pattern stencils
- 100% cotton denim fabric for patches
- A set of mixed needles and metal pins
 - Darning needles
 - Multi-purpose needles





5. Visible mending techniques

Patching / Sashiko

Patching is a technique in which a fabric patch is secured over or under a hole. Can be done with knitted or woven fabric, but it typically works best on woven fabrics and bigger holes, like those knee holes in your jeans! Or open elbows in your favorite button-down shirt.

Sashiko (literall “little stabs”) is a type of traditional Japanese embroidery or stitching used for the decorative and/or functional reinforcement of cloth and clothing. Owing to the relatively cheap nature of white cotton thread and the abundant nature of cheap, indigo-dyed blue cloth in historical Japan, sashiko has a distinctive appearance of white-on-blue embroidery, though some decorative pieces may also use red thread.

From left to right, top to bottom:

- Erin Eggenburg @wrenbirdmends
- Gabriela Martínez Ortiz @ofeliayantelmo
- Keiko & Atsushi Futatsuya @sashi.co
- Nicoletta Vallana @nikipatch





Darning

This technique is traditionally used for mending knitted garments like socks but can be used just as successfully on woven fabrics like denim. It looks complicated but it is really quite simple. Essentially you are re-creating fabric to fill a hole or reinforce fabric where it is wearing thin.

From left to right, top to bottom:

- Tom Van Deijnen @tomofholland
- Michelle @mindyourmenders
- Celia Pym @celiapym
- Collingwood-Norris @visible_creative_mending

Swiss darning (or Duplicate Stitch)

Swiss darning is recommended for reinforcing an intact but threadbare area of a knit. This technique consists in duplicating the existing yarn's path to help keep together a spot that's at risk of turning into a hole.

From left to right, top to bottom:

- Patty Lyons
- Collingwood-Norris @visible_creative_mending
- Marilyn @fractured_mr





Embroidery or crochet-like tricks

Using embroidery techniques or quick tricks will be an easy and beautiful solution for your small holes. Can be done with knitted or woven fabric and it usually requires one test practice and you are ready to go.

Youtube and pinterest are filled with “step by step” gifs or videos on how to create simple designs, like hearts, stars, flowers, leaves or other small shape embroidery. Collect your references and have fun trying it out!

From left to right, top to bottom:

- @mindful_mending
- Beatriz Sandini @biasandini
- Beatriz Sandini @biasandini
- Tom Van Deijnen @tomofholland



6. Basic sewing skills

Choosing the best thread and needle

Give preference for yarns and threads that match the fabric composition of the item to be repaired. Thickness is also an important factor, make sure that you work on similar weight and thickness as your garment. The needle choice will most likely follow the size of your yarn or thread. Remember that the bigger the eyelet, the thicker the needle will be, so for delicate fabrics you can end up with unwanted holes marks, in this case move towards a smaller needle/thread size.

Threading the needle

There are some different techniques on how to thread a needle, but one thing is clear, it gets easier with practice. You can cut the thread on an angle to help out, lick the tip of the thread or also fold the end to insert. Find the way that it works best for you, take your time and don't let it stress you out.

Starting and finishing techniques

To start stitching you can opt for having a knot in the end of your thread, that usually works fine with thin thread. However with thicker threads a knot will be too visible and also uncomfortable, in this case you can sew some stitches on top of each other and leave a tail on the underside to later thread on your stitches. This will also be the technique to finish your project or to change thread.

Basic Stitches

- Running Stitch
- Backstitch





7.

Step-by-step mending techniques

On this session of the step by step you will find a darning and embroidery example of fixing a hole in knit garments.

The denim techniques showcased on the second workshop are added to the complementary material also sent by email. There you will find the complete step by step with animated GIF's and instruction text

1. Sashiko Inspired Grid
2. Patch with Star Grid
3. Darning (on jeans!)



Darning



1. Clean up the hole, cutting away any ragged edges and loose yarn ends



2. Insert the embroidery hoop or darning mushroom. Stretch the fabric but not more than it's natural relaxed state. If you are mending a delicate fabric, consider wrapping your hoop with a stripe of fabric to prevent damages



3. Measure the yarn from your hand to your elbow, cut the yarn and thread the needle. Start by entering the needle away from the stitching area, leave a 10cm tail (we will come later to it)

Darning continued



4. Make parallel running stitches on the whole area surrounding your hole, make sure to work with at least 1cm margin around the damaged area.



5. Continue to create rows of stitches in this way up and down. When you get to the hole itself, simply let the loose thread cover the hole, trying to apply a similar tension to the rest of the material. Once you have sewn rows of thread across the hole, continue to create a few more, until you have reached 1cm to the right of the hole. This will ensure a strong mend. This is called a 'warp' (the vertical threads). To complete the darn, you will now need to weave the 'weft' (horizontal threads).



6. Rotate the hoop 90 degrees and start weaving the rows you have made. The rows should alternate between going over and under the warp - but don't worry if it's not exact. Continue sewing your horizontal rows until you reach the bottom of the vvv darning area.

Darning continued

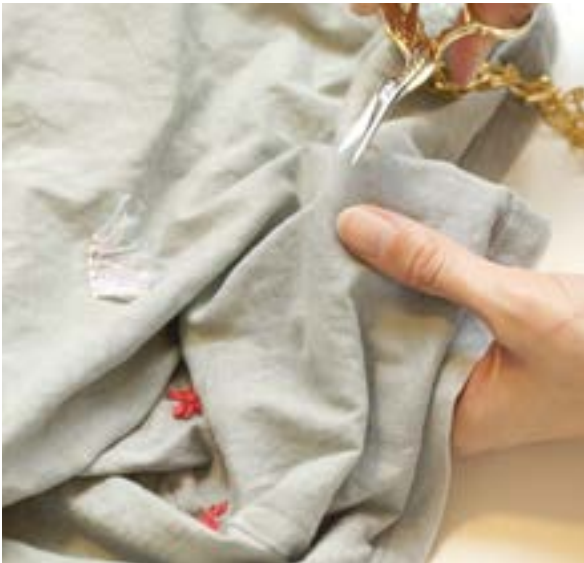


7. When finished, remove the hoop, turn the garment inside out. Thread your remaining tails with one or two stitches, you can secure the yarn with a small knot (if you are fixing sock, avoid using any knot at all!!)

Darning continued



Leaf embroidery



1. Clean up the hole, cutting away any ragged edges and loose yarn ends



2. Draw using your chalk pencil an eye shaped form, keeping the hole in the middle



3. Insert the embroidery hoop

Leaf embroidery continued



4. For this project you can measure two times the distance from your hands to your elbow. Cut the embroidery thread, you will split the 6 strands in two. Save one piece for later, take the other half and thread the needle, you will fold the thread in half and make a knot in the end



5. Push the needle up through the underside of the fabric, on the tip of your leaf



6. Stitch back on the middle and bring it up on the left side

Leaf embroidery continued



7. Go inside on the top right tip of the leaf and come out on the top left side



8. Go down on middle the right side at the same height as the right side



9. Bring the needle out on the left side immediately under the previous stitch

Leaf embroidery continued



10. Repeat the same order until you reach the end

Leaf embroidery continued



11. Finish the stem with some back stitches

Leaf embroidery continued



Sources:

- <https://www.beljacobs.com/latest/the-art-of-visible-mending-a4x5k>
- <https://en.wikipedia.org/wiki/Sashiko>
- Book MENDING LIFE (<https://www.penguinrandomhouse.com/books/604177/mending-life-by-nina-montenegro-and-sonya-montenegro/>)
- <https://www.hva.nl/create-it/gedeelde-content/projecten/projecten-fashion/measuring-the-dutch-clothing-mountain.html>
- Cooper Hewitt, Smithsonian Design Museum (<https://www.cooperhewitt.org/2017/01/03/make-do-and-mend-the-art-of-repair/>)
- Met Museum <https://www.metmuseum.org/art/collection/search/228077>
- Textile Research Centre (TRC) (<https://trc-leiden.nl/collection/?zoek=darning+sampler&cat=&subcat=&q=&s=24&f=0&id=23811>)
- S+oplap Project (<https://stoplap.nl/info-UK>)
- Vesti la natura (<https://www.vestilanatura.com/differences-between-natural-artificial-synthetics/>)
- Sustainable Fashion Collective (<https://www.the-sustainable-fashion-collective.com/2014/12/12/how-is-cotton-made-why-bad>)
- Nature (<https://www.nature.com/articles/s41598-019-43023-x>)
- <https://www.masterclass.com/articles/knit-vs-woven-learn-how-to-identify-the-two-fabric-types#13-common-types-of-knit-fabric>





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