

Wovens, Knits & Nonwovens



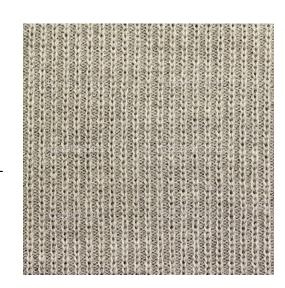
Wovens



- woven on a loom
- consists of vertical (warp)
 and horizontal (weft) threads
 that cross each other
- stretches on the bias (diagonal)

Knits

- flexible
- can be constructed to size (hats or socks)
- warp knit (machine): lace,
 lingerie, tricot, hard to unravel
- weft knit: can be unraveled horizontally, cheaper to produce



Nonwovens

- long strands of fiber that are bonded together via heat, mechanical, chemical, or solvent treatment
- eg: filters, geotextiles, diapers, insulation, medical equipment (surgical gowns)



The Burn Test

make sure you have water close by in a metal container and are in a well-ventilated area

- Cellulose (cotton, hemp, linen, rayon, bamboo):lights quickly, smell like burnt paper, ash is light grey
- Protein (silk, wool, cashmere, alpaca, etc):burns slowly, smell like burnt hair, ash is dark and brittle
- Synthetics (nylon, polyester, acrylic): can burn and shrink quickly, may form plastic drip, black smoke

Resource

Felting



Process of creating objects using bonding fibers.

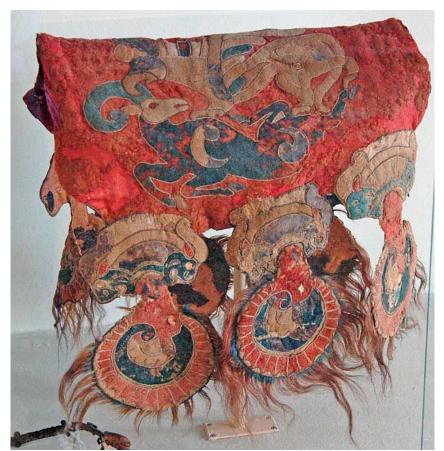
Felting

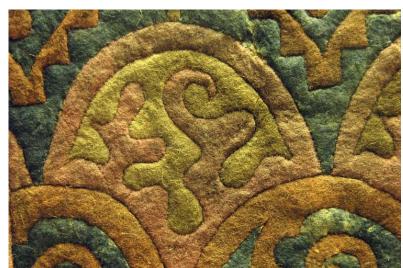




making a robe for Bakhitari shepherds
(Iran)

- earliest examples found in 6000 BCE, origins primarily in Europe and Asia
- used for insulation and protection
- long thorough article

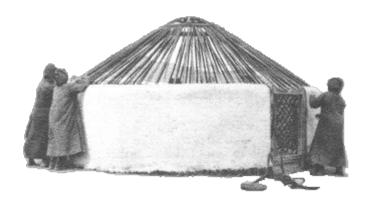




Horse saddle cover, Siberia, 300 BCE

Yurts!









Wet Felting

Using water and soap to create felted objects. <u>Tutorial</u>



















Felting other objects!



Fulling

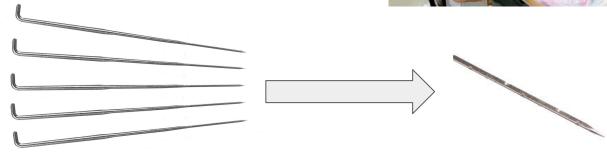
Felting a knitted or woven object after it is made.



Needle Felting

- 19th c. industrial felting machines used rows of sharp barbed needles
- 1980's became tool for home crafting



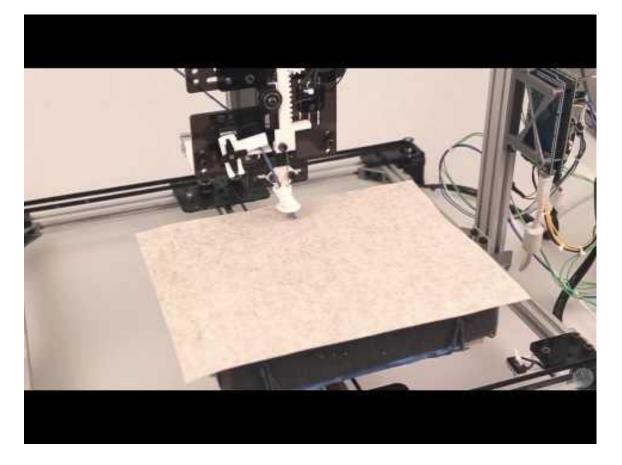












Printing Teddy Bears: Disney Research (Scott Hudson)

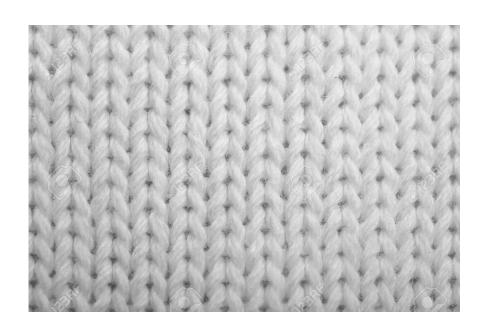


Demo project

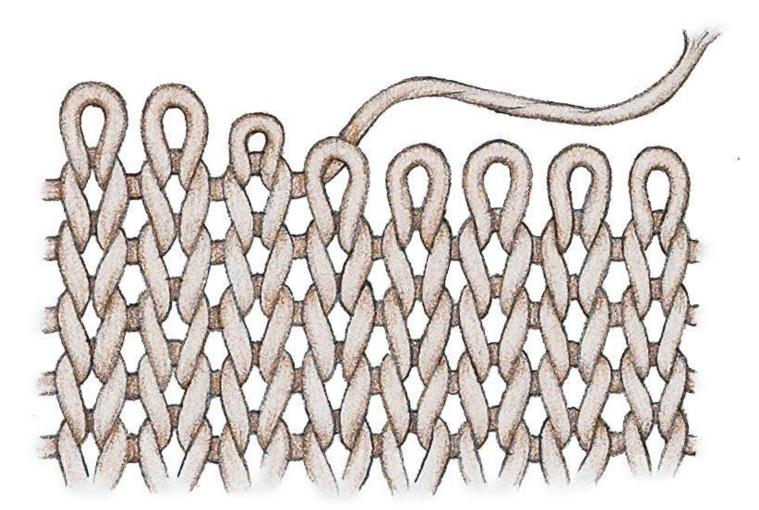
Make an object out of needle felt.

Knit vs. Crochet

Creating interlocking loops using a continuous strand of yarn

















3rd century sock, Egypt using naalbinding technique (one needle knitting)





- ~10th century, Egypt
- knitted Khufic (Arabic) blessings in pattern
- cotton yarn

- 1275, Spain: liturgical gloves
- considered luxury items reserved for royalty or wealthy







- by 1400's, demand rose and knitting guilds and cottage industries established
- knowledge of technique spread





British sailors, WWI

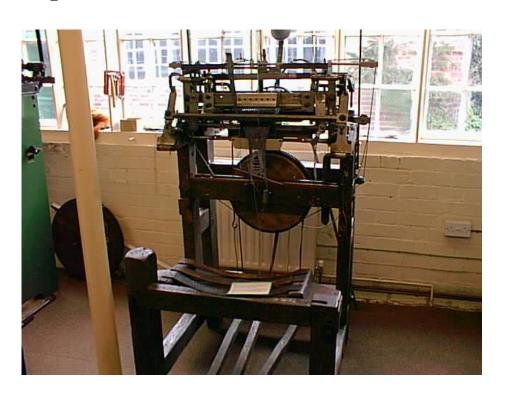
Estonian socks

Unraveling for material reuse



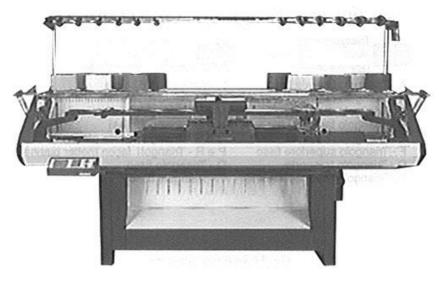
Stocking Frame

- 1589, Nottingham England: William Lee
- imitates handiwork of hand knitters









Circular sock machine

Flatbed knitting machine

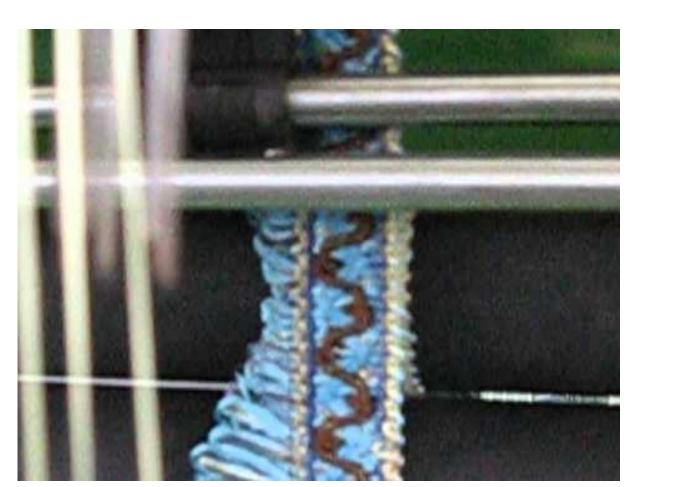


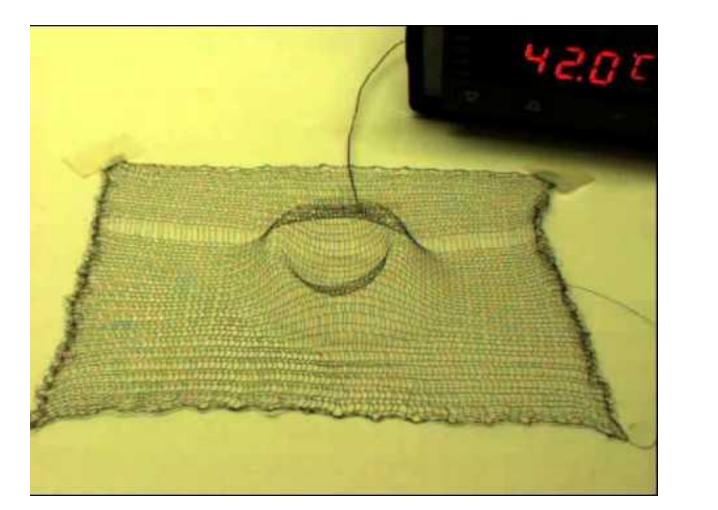


re-creation of first crochet pattern from 1823



19th century crocheted lace





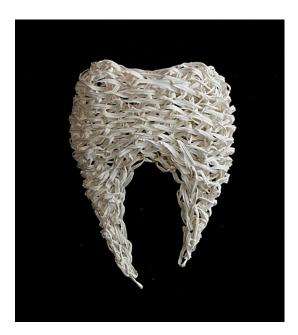


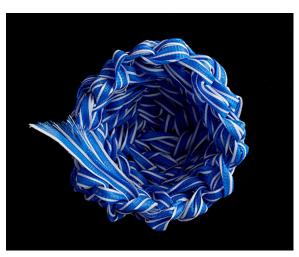


Sandra Backlund



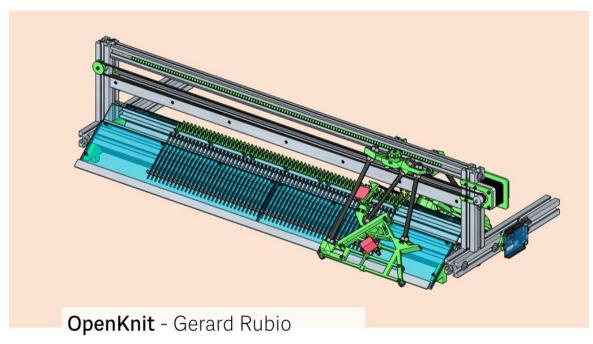
Freddie Robbins - Anyway







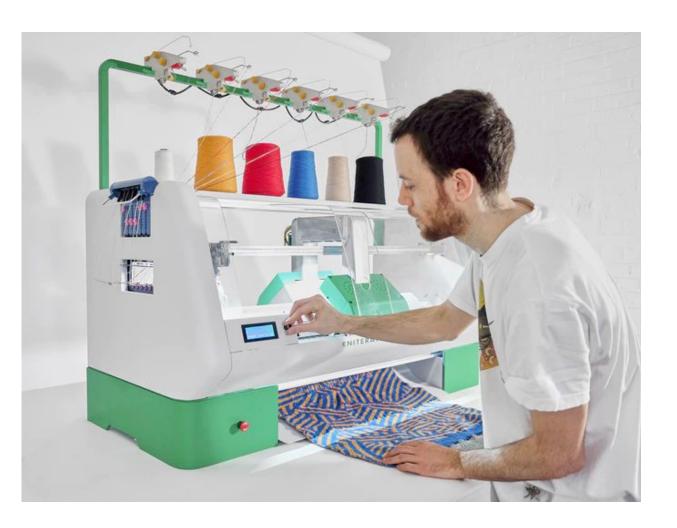
Pate Conaway





SOURCE: OPENKNIT.ORG

https://vimeo.com/86987828

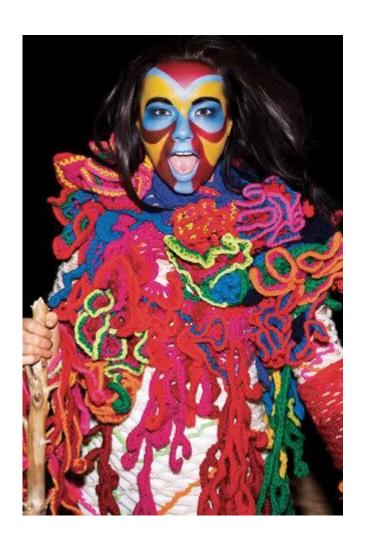


Kniterate Kickstarter









DEMO: crochet

Demo Project

- crochet a line
- crochet a 2D shape
- crochet a 3D shape