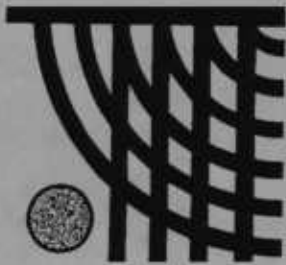


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# Woven, Knitted, and Other Fabrics

## 4-H Clothing, Skill Level 1

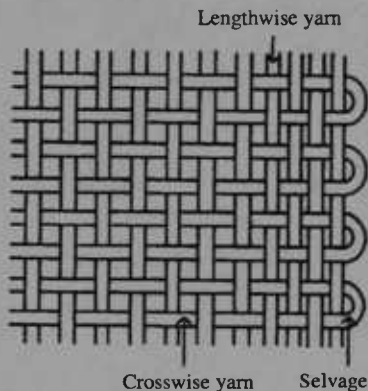


Figure 1

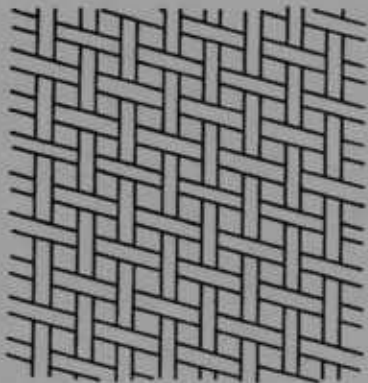


Figure 2

There are many ways to use fibers or yarns to make fabrics. Some of these ways are weaving, knitting, lacemaking, and felting. Fabrics made in these ways are described here. Since the way a fabric is made determines how it looks, handles, and behaves, you should be able to tell the difference between some of the more common fabrics.

### Woven fabrics

Woven fabrics are made of two sets of yarns. The yarns are crossed over and under each other to make the fabric. One set forms the length of the fabric, the other forms the width.

The lengthwise fibers are called the *lengthwise yarn direction* or the *lengthwise grain*. The crosswise fibers are called the *crosswise yarn direction* or the *crosswise grain*. The lengthwise sides or edges of the fabric are called *selvages*. They are extra strong and do not ravel.

Yarns may be woven in different patterns called *weaves*. Each kind of weave may be made by using different fibers, yarn sizes, and spacings between yarns. A plain weave is often used because it gives a strong, firm fabric. Some other weaves are satin, velvet, velveteen, terry, and corduroy.

When you buy woven fabric, check to see that the lengthwise yarns and the crosswise yarns are square with each other. This is called *on-grain* (Figure 1).

Fabrics that do not have yarns that square with each other are called *off-grain* (Figure 2). Most fabrics made today have finishes that will not let you straighten or square the yarns if it was not done during manufacturing.

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## Knitted fabrics

Knitting is a way of making fabric where needles are used to loop yarns together. There are two main types of knitting—*weft* knitting and *warp* knitting.

### Weft knitting

Weft knitting is similar to hand knitting. The knitted loops are made one at a time and added to each other in a crosswise direction. A row of loops is called a *course*. As the loops are added on top of each other, they make a lengthwise direction called a *wale*. Two kinds of weft knitteds are *single knit* or *jersey*, made with one set of needles, and *double knit* made with two sets of needles.

*Single knit* or *jersey* has knitted loops facing only one side of the fabric (Figure 3). It is a fairly stretchy fabric with each side having a different look. Single knits have more stretch crosswise than lengthwise. Some patterns are designed for sewing with knitted fabrics. These patterns have a printed guide on the back of the pattern envelope for testing the stretchability of the fabric. A *rib knit* is a special type of single knit. It has lengthwise rows that face opposite sides of the fabric. Rib knit looks the same on both sides. It is often seen on the cuffs or neckbands of sweaters. It is bulkier than other single knitted fabrics, but has good stretch.

*Double knit* fabrics are made by machines with two sets of needles, giving a double thickness to the fabric (Figure 4). They are generally run-proof, and do not stretch as much as single knitteds. Unless the fabric is textured or patterned, it may be hard to tell the right side from the wrong side. Double knit fabrics are often used with patterns suitable for woven fabrics, rather than patterns for stretchy knits.

### Warp knitting

Warp knitting uses many more yarns than weft knitting. Each warp yarn is guided by a needle and follows a zigzag path through the fabric. Warp knitting makes a run-proof fabric which is flatter and not as bulky as fabrics made by weft knitting. One example of a weft knit is tricot (Figure 5), which is lightweight and often used for making lingerie.

## Other types of fabrics

*Lace* is made by twisting and knotting threads around each other to make a pattern. Lace may be a simple net or a detailed design. It comes as trim or dress-width fabric.

*Felt* is made by matting together wool or hair fibers. Sometimes man-made fibers are also used. Felt does not ravel and does not have a yarn direction or grain.

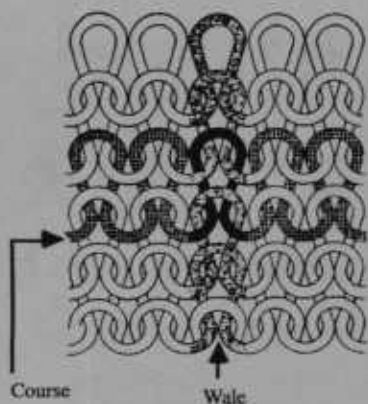


Figure 3

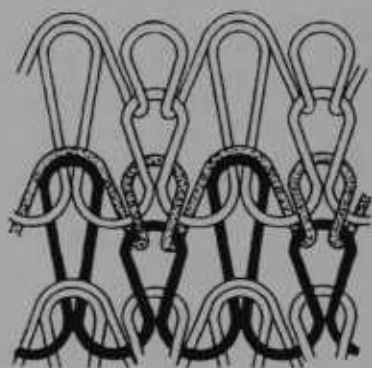


Figure 4

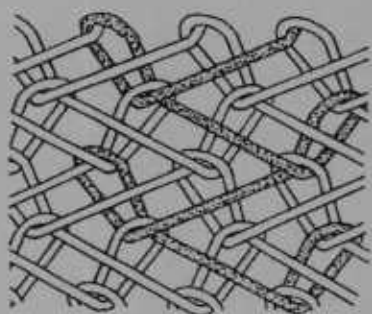


Figure 5

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Illustrations of knits reprinted with permission of National Knitted Outerwear Association.

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